A Dissertation on

"A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER"

Submitted to

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

in partial fulfilment of the requirements

for the award of degree of

M.D. (PSYCHIATRY)

(Branch-XVIII)

GOVERNMENT STANLEY MEDICAL COLLEGE & HOSPITAL

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

CHENNAI, TAMILNADU

APRIL 2015

CERTIFICATE

This is to certify that this dissertation entitled **"A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER"** submitted by **Dr. SENTHIL KUMAR A.S.** to the faculty of PSYCHIATRY, the Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfilment of the requirements in the award of degree of M.D.(PSYCHIATRY) Branch - XVIII for the April 2015 examination is a bona-fide research work carried out by him during the period of July 2014 to September 2014 at Government Stanley Medical College & Hospital, Chennai, under direct supervision and guidance of **Prof. Dr. T.V. ASOKAN, M.D., D.P.M.**, Professor and Head of the Department, Department of Psychiatry at Stanley Medical College, Chennai.

Prof. Dr. T.V. ASOKAN M.D., D.P.M.,
Professor and HOD,
Department of Psychiatry,
Government Stanley Medical College and Hospital,
Chennai – 600 001.

Dr. A.L. MEENAKSHI SUNDARAM M.D., D.A.,
DEAN
Government Stanley Medical College and Hospital,
Chennai – 600 001.

CERTIFICATE

This is to certify that this dissertation titled **"A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER"** submitted by **Dr. SENTHIL KUMAR A.S.** is an original work done in the Department of Psychiatry, Government Stanley Medical College and hospital , Chennai in partial fulfilment of regulations of The Tamil Nadu Dr. M.G.R. Medical University, for the award of degree of M.D. (PSYCHIATRY) Branch – XVIII , under my supervision during the academic period 2012-2015.

Prof. Dr. T.V.ASOKAN M.D. DPM.,

Professor and Head of the department,
Department of Psychiatry
Government Stanley Medical College & Hospital,
Chennai.

DECLARATION

I, **Dr. SENTHIL KUMAR A.S.** solemnly declare that the dissertation **"A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER"** is a bona- fide work done by me during the period of July 2014 to September 2014 at Government Stanley Medical College and Hospital, under the expert supervision of **Prof. Dr. T.V. ASOKAN , M.D., D.P.M.,** Professor and Head of Department of Psychiatry, Government Stanley Medical College, Chennai.

This thesis is submitted to The Tamil Nadu Dr .M.G.R. Medical University in partial fulfilment of the rules and regulations for the M.D. degree examinations in Psychiatry to be held in April 2015.

Dr. SENTHIL KUMAR A.S.

Chennai-1

Date: - -2014

ACKNOWLEDGEMENT

I wish to thank **Dr. A.L. MEENAKSHI SUNDARAM M.D., D.A.,** Dean, Stanley Medical College and Hospital, Chennai for permitting me to carry out this study.

With sincere gratitude, I wish to acknowledge the expert guidance and suggestions of my HOD and chief **Prof. Dr. T.V. ASOKAN M.D., D.P.M.,** without whose guidance this study would not have been possible.

I am deeply indebted and grateful to our **Associate Prof.Dr.R.SARAVANA JOTHI M.D.,** Department of Psychiatry, Stanley Medical College, Chennai for the able guidance, constant inspiration and continuous encouragement rendered at every stage of this study.

I am deeply indebted to and highly grateful to **Dr. M. MOHAMED ILYAS M.D.,D.P.M.,** and **Dr. V. VENKATESH MATHANKUMAR M.D.,** Assistant Professors, Department of Psychiatry, Stanley Medical College, without whom this work would not be in the present shape.

I wish to thank all my co-post graduates for helping me in this work.

I gratefully acknowledge all patients and participants who gave their consent and co-operation for this study.

CONTENTS

TABLES

GRAPHS

22	BIPOLAR EPISODE FREQUENCY PAST 5 YEARS	74
23	GHQ SCORE	78
24A	SPOUSE PSYCHIATRIC DIAGNOSIS	79
24B	SPOUSE PSYCHIATRIC DIAGNOSIS	80

ABBREVIATIONS

EPSILON	European Psychiatric Services: Inputs linked to Outcome Domains and Needs
CATIE	Clinical Antipsychotic Trials of Intervention Effectiveness
BPRS	Brief Psychiatric Rating Scale
BPAD	Bipolar Affective Disorder
CGI	Clinical Global Impressions
BAS	Burden Assessment Schedule
QOL	Quality Of Life
WHOQOL-BREF	World Health Organisation Quality of Life Instrument
GHQ	General Health Questionnaire
ICD-10	International Classification of Diseases 10^{th} ed. Classification of mental and behavioural disorders, WHO
DSM IV TR	Diagnostic and Statistical Manual of Mental Disorders 4^{th} edition text revision
ICU	Intensive Care Unit

“A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER”

ABSTRACT

AIM

To compare the family burden, the quality of life and psychiatric morbidity between female spouses of patients with alcohol dependence syndrome, patients with schizophrenia, and patients with bipolar affective disorder.

MATERIALS AND METHODS :

In this cross-sectional, comparative study with consecutive samples of 64 male patients with alcohol dependence, 64 male patients with schizophrenia, and 64 male patients with bipolar affective disorder attending the outpatient Psychiatry department at this tertiary care hospital, and their spouses, who fulfil the study criteria and provide consent. Instruments used along with sociodemographic data were Burden Assessment Schedule for assessing burden in spouses, WHOQOL (BREF) scale for quality of life, and General Health Questionnaire-12, MINI plus, Beck Depression Inventory and Hospital Anxiety and Depression Scale (HADS~A) for psychiatric morbidity.

DISCUSSION:

Majority of the female spouses from all the three groups of study had severe family burden about 51% in alcohol dependence group, 76% in bipolar disorder group, and 82% in

schizophrenia groups. Quality of life was poorer in schizophrenia group compared to the other groups. It correlated negatively with the burden severity in all three groups, more in spouses in alcohol dependence and schizophrenia groups. Psychiatric morbidity including severe depression was found more frequently in spouses of alcohol and bipolar disorder patients compared to schizophrenia. Burden severity and depression severity positively correlated significantly in all three groups.

CONCLUSION:

Increased burden of care, poor quality of life and psychiatric morbidity in female spouses are not only limited to major psychiatric disorders, but are also seen profoundly in alcohol dependence syndrome. This warrants specific spouse/family-focused psychological treatment approaches and further supportive measures for spouses, in view of preventing psychiatric morbidity in spouses and improving treatment adherence and prognosis in patients of alcohol dependence, bipolar disorder and schizophrenia.

KEYWORDS: Spouses, Burden, Quality of life, Psychiatric morbidity, Alcohol dependence, Bipolar disorder, Schizophrenia

INTRODUCTION

A family is the smallest social unit comprising of individuals bound with each other by a relationship that is psychological,[2] social, and many times biological; the other salient feature being eternal and materialistic interdependence, sharing and support, especially offering guidance and solace during stressful life situations. Role of family in caregiving has been consistently acknowledged in many large studies, as one of the most significant factors in determining the course and outcome in psychiatric disorders[1]. Spouse is the single most important caregiver especially when she has to overcome difficulty in addition in financial, security and sexual dimensions[107] due to illness, when compared to parents.

Unlike the west, where importance of family care givers has been recently begun to be emphasized with the popularity gained by de-institutionalization among the professionals, in India the family had always been the anchor in the care and successful management of mentally-ill persons since ages. Currently a typical pattern observed consistently even in persons with schizophrenia, is a short inpatient stay for a few weeks at the most followed by discharge to their families.

Even in the absence of a traditional family structure, at least two third of persons with schizophrenia live with one or more adult family members. Natural, social integration into the family provides an immense scaffold for the patient's progress, which cannot be sufficiently substituted by any other mode of outsourced caregiving private, professional or corporate.

Living with a person with major psychiatric illness forces a unique and predominantly negative experience, and considerable burden and restrictions in multiple dimensions, on the family members, especially primary caregivers.

CAREGIVING EXPERIENCE:

At first place, intimate relatives experience a feeling of sudden transient loss of an eternal companion, and grief, during initial presentation, which worsens and become persistent later when they gradually become aware of and confronted with the probable chronicity of the illness. They get puzzled with uncertainty, and sense a curse forbidden with an eternal solitude. They may feel stigmatized, and emote shame, guilt, anger and a sense of having been deceived. They may endure a subjective perception of fragility from inner desolation and social isolation[115]. Burdening already existing family duties with a specific caregiving role increases both psychological and economical stress tremendously.

Caregiving disrupts one's personal lifestyle and routine, forcibly alters his or her preferences, involvement in career, forego rare opportunities, dampens enthusiasm and energy in pursuing one's own fantasies, impedes his or her personal development, and also severely limit recreational activities, apart from the economic, emotional and physical burden.

CAREGIVER BURDEN- DEFINITION:

Grad and Sainsbury defined family burden as the negative impact on the family caused by the caring of a sick family member[36]. According to Zarit, Bach-Peterson and Reever[6], burden is the extent to which forcible adaptations in emotional, social physical and financial state are perceived by a caregiver. It is the product of a caregiver's subjective perception. Caregiver burden as a term currently is used to quantify the physical, psychological, financial and social distortions endured by the primary caregiver of a chronically ill family member.

Burden can be of two types: subjective or objective. It can be occurring out of privilege or traditional family role, volunteering, over involvement or compulsion, and altruistic, symbiotic or materialistic facets. Subjective burden denotes perception in the caregiver caused from the fulfilment in caregiving function. According to Montgomery, Gonyea, and Hooyman, subjective burden is due to the emotional reaction from the impact of caregiving experience. Objective burden denotes the event or activity involving negative caregiving experiences, as explained by Hoenig and Hamilton[7]. It is the disruption in many aspects of family that is expressed and is arguable and agreeable as per Platt[33]. It is in contrary to subjective burden which needs to be communicated by the caregiver himself for others to become aware of.

IMPACT OF MENTAL ILLNESS ON COMMUNITY:

Alcoholism is a major public health problem worldwide. About 33% of the population in India consumes alcohol as per Ray R[16] from a National Survey 2004, and Gururaj et al[15] in a study at Bangalore. Major mental disorders like schizophrenia and bipolar disorder lead to a great deal of morbidity and disability in developing countries (Patel & Andrade, 2003). Major Depressive episodes are the fourth leading cause of disease burden and loss of productivity. Alcohol[14] use disorders and bipolar illness are the second and third leading cause of disability among psychiatric illnesses worldwide as per World Health Organization's global disease burden 2010. The trend has been continuing consistently since past two decades. All three disorders are complex, difficult to treat, and cause restrictions in the execution of psychological or social role functioning, more and evermore so in the face of insufficient or inappropriate care, resulting in further interpersonal stressors and drug non-compliance.

Even after the acute phase has been treated, residual symptoms cause significant functional impairment. While all three disorders lead to disability, the degree of disability may not be comparable (Bowie et al; Bottlender et al, 2010). Quality of life (QOL) measures are potentially useful methods to demonstrate the impact of mental illnesses and the possible benefits of therapeutic interventions (Berlim & Fleck[2]). Severity of symptoms and resulting disability leads to deteriorating quality of life of both patients and their family members, and increases caregiving burden on the latter. Quality of life, which is a subjective construct, also varies from person to person.

Schizophrenia is a clinical syndrome of profoundly disruptive psychopathology involving cognition, emotion, perception, and other aspects of behaviour; it is principally a disorder of thought. It runs a chronic course and may directly affect patients' aspect of personal care, his perception of reality, personality, functional productivity and social interaction. It may be studded with bizarre perceptions and ideas, and hostile reaction towards normal events and innocuous or caring activity of spouses, family members, neighbours and the environment as a whole.

Bipolar affective disorder is a mood disorder that alternates between two extremes – one of unproductive hyperactivity, distractibility and intrusions on others, and the other of inactivity, sadness, hopelessness and suicidal thoughts. Paradigm[143] shifts that have occurred in the treatment of bipolar disorder include:

(1) a growing awareness that bipolar disorder is a chronic illness and needs long-term maintenance treatment,

(2) a realization that the focus of treatment needs to be on the illness itself, not individual episodes, and

(3) there cognition that full functional recovery, not just symptomatic recovery, should be the goal of treatment.

Achieving these objectives when treating a patient with bipolar disorder calls for a careful combination of psychosocial and pharmacologic strategies on the part of the healthcare provider. An important aspect of long-term management that directly affects the effectiveness of treatment is the patient's adherence to his or her treatment regimen (Bowden and Singh[21]), which universally is entrusted upon the primary caregiver in mental illnesses, solely due to gross insight deficits in the patients.

Severity of the symptoms in the patient and apathy expressed by him are the most important and relevant factors embossing upon the interface between the cared and the carer. Apathy defined as “a lack of motivation relative to one’s previous level of functioning”; it is typical in depressive phase of bipolar disorder and chronic schizophrenia; salience with preoccupation about procurement with unconcern for everything else is common in alcohol dependence syndrome. It predominantly influences the current functioning level of the patient, and the motivation for caregiving in the family members. It is a prominent factor in patients with long-term schizophrenia and alcohol dependence affecting their personal care, daily activities and interpersonal and work relationships. Apathy in bipolar patients is prominent in depressive episodes and also is common in between episodes.

The management of subsyndromal symptoms is a major concern in the long-term treatment of bipolar disorder. Yatham[143] and co-workers analyzed pooled data from a couple of large maintenance trials to determine whether the polarity of the previous episode predicted the polarity of subsyndromal symptoms. Subsyndromal symptoms of depression were 12.5 times more frequent than subsyndromal manic symptoms in patients with an index episode of depression, and subsyndromal manic symptoms were just 1.4-fold more frequent

than subsyndromal depressive symptoms in patients with a previous manic episode. Hence some degree of apathy and resulting functional deficit is expected in subsyndromal bipolar state as well and may be perceived by the carer even in objectively euthymic state also.

IMPACT OF ALCOHOL DEPENDENCE AND MAJOR PSYCHIATRIC ILLNESS ON THE SPOUSE:

Alcoholism is considered as a continuously active stressor, not only for the individual, but for family members as well; Steinglass P[17] and Tomori M[18] elaborated the impact of alcoholism on the family and the relationship between degree of alcohol dependence and psychiatric symptomatology, and personality characteristics of adolescents with alcoholic parents. Alcohol dependence has adverse health, family and social consequences, and spouses bear the maximum impact given the intimate nature of their relationship and the constant exposure to the behaviour of the alcoholic (Hurcom C, Copello A, Orford J[19]).

Since spouses play a major role in managing the family with an alcohol dependent male, psychological distress from alcohol-related complications and behavioural disturbances including suicidal gestures, abuse (Halasyamani MK, Davis MM, Bhattacharjee S[20]), financial and social demands, results in coping less efficiently (Chandrasekaran R et al[22], Rao TS et al. [23]), thereby adversely affecting their mental health increasing the likelihood of psychological problems, and their social and functional role. Other dominant issues like negative and unlikable social consequences of alcohol consumption, stressful life events, poor social support (Bhowmick P, Tripathi BM et al[24]), in addition to economic burden and social stigma interact to diminish the individual's ability to adapt, leading to further emotional distress.

Schizophrenia and bipolar disorder not only affect the harmony in the family, but also bear a more definite impact like financial deficits from loss of interest or distractibility

resulting in decreased productivity, absenteeism and unemployment, and misappropriation of money; female spouses apparently have to put up with this, along with the distress encompassing behavioural disturbance, uncooperation, hostility, and apathy of the patient. Suicidal gestures produce momentary aggravation in the cumulative and ever-increasing psychological distress in female spouses. Studies show varying levels of burden and quality of life in spouses of psychotic patients.

Providing care to male family members dealing with chronic illness results in feelings of burden and strain for spouses the primary caregivers. Caregiver-related factors such as emotional over-involvement and burden of care are also associated with a reduction in patients' quality of life. Spouses of severe mental illness face stigmatisation, long term economical and emotional burden taking care of the patient. Illness also has a serious negative impact on work, social relationship and leisure activities of the family members. This affects their quality of life, coping mechanisms[127,128] and at the extreme result in consequences like marital separation, psychiatric morbidities, drug abuse, suicide or homicide.

Burden also consists of restricted leisure time recreations and social life increasing strain in physical health interpersonal frictions with other family members due to reduction in time spent for them, changes from family routines, poor concentration and mental fatigue resulting in loose work performance, and ever-dipping self-esteem all of which contribute to a gradual progressive slump to a burn-out.

In addition further significant life events hasten this process, which creates a vacuum in the caregivers' perception of meaning and appreciation of life, and questions on the self-confidence and integrity in commanding his or her senses and potentials. The resulting perceived insufficiency of one's self, cognitive distortions, and the learned helplessness from

the comprehension and revelation that the illness may prolong indefinitely, together with the never-ending caregiving, end in depression and related disorders.

As corroborated by Folkman and Lazarus[99], recent stressful events were found to be associated with the forms of coping by the subjects which in return determined the strength of positive and negative emotions. In a study by Pompili et al searching various e-databases including Cochrane, among factors in primary caregivers over a 48 years period, patients behaviour and patient role deficits caused higher distress in bipolar disorder[101].

Burton, Newson et al concluded in their study that spousal caregiver with better sense of control was associated with preventive behaviours towards their physical and mental health[102]. But restricted recreation and exercise, lesser leisure time lesser rest in care of personal illness, and forgetting her own medications, were all significantly affected in the primary caregiver group.

In a study on 46 primary caregivers of bipolar I or II patients, family focused therapy improved the coping strategies decease in patients' depression. It showed the influence of caregiver's mental health on the course and prognosis of the patient's mental illness. Support groups and family education groups for the caregivers of psychiatric illnesses, like the "National Alliance of Mental Illness"—NAMI's Family-to-Family program, and the "Support and Family Education Program" –SAFE, elaborate the impact of interest and participation of family members in the psychosocial—interventions for bipolar and other major psychiatric illness[104,103].

Spousal impact due to chronicity in Schizophrenia:

Schizophrenia has a lifetime prevalence of 1% in the population. Typical onset is around late adolescence or in early adulthood. A significant proportion of the population with

this illness remain unmarried, separated or divorced; while only some of the patients get married and continued to be married. This is more so in adolescent onset of the illness.

Lifespan of unmarried persons with schizophrenia is considerable less compared to that of married persons. This is evidence portraying the importance of spouse (more in the case of female spouses) in the prognosis in the patient. Schizophrenia presents with varying symptoms persons with –positive, negative or cognitive. Whatever they maybe, patients show severe deterioration in their functioning capacity and disturbed behaviour from delusional thinking, hallucinatory perceptions, and thought disorders. Even with continuous optimum treatment and drug compliance, the illness has a course studded with exacerbation or relapses of these symptoms, in one third of the patients (Thara et al[4]). Negative symptoms including alogia, avolition, a motivation, flattening of affect, and generalized mental slowing, also tend to frustrate a primary caregiver. This is more so when the latter's subjective burden is not acknowledged, and often trigger marked interpersonal difficulties. Due to these issues, mental illness produces tremendous psychological, pragmatic and economic tribulations on the primary caregiver –inclusive of parents or partners. But the spouse has perceived deficits in additional domains like decreased time spent for children, and problems in social mileu, and her personal privileges including rest, common leisure-time activities, and sexual satisfaction. Volunteering as a primary caregiver when she has the option of moving away from the patient doubles up with further dimensions like frustration from the self-imposed burden of care, or self-gratification attained from caregiving as an achievement.

Unlike the male caregivers the financial part of the burden is an extra component in case of female spouses who are housewives. Due to the chronicity of any major mental illness these demands persist unresolved over a long duration. When the caregiver runs out of her coping resources, the much needed support, guidance and counselling may be still found

wanting. Thus it results in negative outcomes including poorer perceived quality of life, and psychiatric morbidities like depressive disorder and/or anxiety features.

Hitherto most of the studies have consistently pointed towards higher burden levels and significantly reported distress—including frustrations, grief anxiety, depression, and somatic complaints (insomnia, headache, fatigue body aches) in the carers of alcohol dependence and primary psychotic disorders like schizophrenia[13,127].

Spousal Impact due to relapses in Bipolar Affective disorder:

Bipolar affective disorder is the other major psychosis that causes immense burden and reciprocating emotional distress, in all the three presentations as manic, mixed or depressive episodes. Lifetime prevalence rate is about 5% for bipolar spectrum disorders, and at least 1% for a typical bipolar disorder. Outbursts of anger from intense irritability and violence from excitement especially when refuted or provoked, accompany markedly elevated and expansive mood, in the manic episode. Apathy, psychomotor retardation, loss of interest in previously pleasurable activities loss of sleep and suicidal ideation characterize a depressive episode. For a diagnosis of either episode symptoms should last a minimum of at least a week or 2 weeks respectively, and significant impairment in interpersonal, social and occupational functioning is also necessary[1,112,35]

Like schizophrenia, bipolar disorder too involves significant caregiver distress and burden, marital disharmony and premature mortality in the patient. Often exacerbated by other medical conditions, the recurrent nature of the disorder bears a greater physical, emotional and economic impact on the patients, the caregivers and the society[35].

Both groups of symptoms may occur simultaneously or rapidly alternate between them, in mixed or ultradian type. All these episodes disrupt daily life and interpersonal relationships both within the family and at work.

Greater constraint, vigil, duty and demand are placed on the caregivers to restrain, and secure the patients (especially violent males) and also prevent incidents resulting from the patient's aggressive assaultive behaviour, including damage to properties. This is moreso during acute phase of illness. Such expectations and watch dog duty is also essential during severe depressive episodes, especially with apparent suicidal risk aware by the caregiver, from previous history of suicidal attempts. Similar demands persist during remission and in subsyndromal state also, wherein residual symptoms may continue to exist demanding strict and vigil caregiving[21].

Compared to schizophrenia and major depression lesser literature exists on caregiver burden due to bipolar disorder. Studies show patterns and prevalence by burden in bipolar disorder similar to recurrent depressive disorder and schizophrenia[21,127], though the former unlike the latter is cyclic and episodic, and the degree of caregiver burden chronologically in relation to the acute or subsyndromal states of the episode. Age of onset of illness is comparable to schizophrenia, and so is the duration of caregiving. Also long-term studies especially on the state of the caregiver many years past the onset of illness are available for bipolar disorder only in developed countries.

FACTORS PREDICTING CAREGIVER BURDEN:

Several studies identified the determinants that either partly or grossly influence the caregiver burden, especially age, sex, marital status, duration of caregiving, time spent for caregiving, education, severity of illness, prior hospitalizations, and employment[27,28,29]. These factors typically affect the psychosocial dimensions of caregiving. Patient's

appreciation of caregiver's efforts, his emotional reaction and behaviour towards the primary caregiver as perceived by the caregiver, the latter's innate resiliency and attitude towards relationships and care, her positive and negative caregiving experience, and frequent acute accentuations of burden of care due to superimposition with stressful life events, further complicate the net quantum of burden perceived, and the propensity for burnout.

QUALITY OF LIFE:

The Quality of life group of the World Health Organization(WHOQOL) elaborate quality of life as " the subjective perception of an individual, of his or her position in life-pertaining to the context of the prevailing value and culture systems in the mileu he or she thrives in, and in relative transgressions, short-term concerns and long term goals"[72].

As per WHOQOL, the quality of life concept comprises of at least 4 different major dimensions: the emotional and the physical health of the individual, his or her psychological and hence social wellbeing functional ability to normally conduct daily routines, and economic assurance and the fulfilment of individual goals and personal expectations.

Importance of Caregivers in Mental illness:

Studies conclude subjective burden and depression both individually and together affect the cares efficacy in managing caregiving demands, and result in poor patient outcomes. Higher burden correlated with an increase in emotion-based coping and also decreased sense of control and mastery among the carers.[38,39] This in return decreased drug adherence and treatment outcome in patients.[31,32,100] Higher levels of burden was also associated with insufficient self care and ailments with respect to their own health, which in turn affected their resilience, and enthusiasm in managing emergent problems in the patients with bipolar disorder[60,37]

Importance of treating Caregivers as needed:

Informal caregiving by intimate family members is contributory for favourable outcomes in the maintenance and prognosis of illness in patients (M Pompili et al[101]). It underlined the need to comprehend the views of caregivers, their individual perceptions of various stresses and the demands that rise out of the caregiving process. There is also a need to define appropriate practical interventions.

Psychiatric morbidity, marital dissatisfaction in spouses and higher adverse consequences alcohol dependence in their husbands, were found to be significantly correlated with each other and their association was robust particularly when problems in the physical, interpersonal and intrapersonal domains were high (Kishore, Pandit, Raghuram[13]).

Zarit S[97] estimated that 40 to 70% of cases show clinically significant depressive features, and 25% to 50% of this group meet major depression criteria. Stress of caregiving for dementia patients impact on the carer's immune system and persist for three years even after their caregiving has ended, increasing the chances of acquiring a chronic psychiatric illness themselves as per Glaser et al[95]. Caregivers perceiving extreme stress are shown ageing prematurely, taking off a mean of 10 years from their life (Elissa Epel et al 2004,[92]). Christakis and Salaman[96] estimated that in female spouses of patients the mortality risk was increased by 44% while it is 35% in case of male spouses.

Studies showed people in the groups with suicide ideation during their lives reported receiving significantly less support from their family and had greater feelings of dissatisfaction with that support than those in the other groups (Hirokazu Tachikawa[12]). This is more relevant in the context of less supporting and more-to-be supported husbands with psychiatric illnesses. Family-focussed strategy was found quintessential even with the advent of novel treatment strategies in patients with bipolar disorder observed Miklowitz PJ[93]). In a

randomized controlled trial 113 euthymic bipolar patients their caregivers attended group psycho-education sessions twelve times, and frequency of further manic or hypomanic episodes over the next 12 months decreased in the patients, with increased symptom-free intervals (Colom et al[110]).

RATIONALE FOR THE STUDY:

Psychiatric disorders account for 31 percent of disability from illnesses worldwide. Major psychiatric disorders like schizophrenia and bipolar disorder are among the top 10 and top five leading causes of disability respectively.

- Female spouses form the single most primary caregiver group, because though both parents and spouses are entrusted upon with similar burden from patient care, spouses perceive additional deficits in sexual, interpersonal and future dimensions including loss of an intimate relationship and regarding unfulfilled commitments.
- Despite being an apparent problem in a grossly troubled study group, research data related to the psychiatric morbidity in female spouses caring individuals with alcohol dependence, schizophrenia and bipolar disorder, in the study locality is found wanting, and even otherwise is little evaluated in world literature. Though the issue is appreciated by the community, the few modifiable perpetrators known in these psychiatric morbidities in the patients as well the caregiving spouses, have not been attended to hitherto.
- Physical and mental health of the primary caregiver the spouse needs to be safeguarded to avoid patient getting worser, and to prevent development of psychiatric illness in the spouse herself by appropriate measures.
- Similarly there are not much studies comparing the quality of life and effect of significant stressful life events, between these three major psychiatric disorders.

- Being a developing country, there still is a lingering bane of stigma on schizophrenia and other major psychiatric disorders, and is evidenced by the resort to recurrent application to the law on the grounds of mental illness, against the patients population the victimized lot. This state of affairs is hurting particularly in the background of a high literacy rate in such parts of the developing world. In this setting, a female spouse as a primary caregiver of the mentally ill person discharging simultaneously multiple functions and running the family more by herself and who secures treatment adherence would be a commendable accomplishment. It is of utmost importance to ensure the mental well being of the spouse –as the primary caregiver without whom the illness would progressively worsen with difficult to manage drastic complications.
- Suicide rates are usually higher among patients with lesser social support Post et al[94], in all three episode types in bipolar disorder, and also comparably high in alcohol dependence and schizophrenia groups as well. Ponnudurai et al[26] strobes on the increasing suicides among spouses of psychiatric illnesses as well.
- It is more prudent to concentrate on the burden-contributing factors to help the patients with better undiluted attention and care, for a better therapeutic outcome, and help their spouses to make a constructive living.
- There are surprisingly little studies on assessing long-term caregiver burden and pertinent determinants like apathy and significant life events in this part of the world, in major psychiatric disorders and alcohol dependence.
- The current study is therefore underwent with the objective of comparing the pattern of burden its determinants and its impact an quality of life and psychiatric morbidity experienced by the caregivers; also an attempt has been made to evaluate and to compare the influence of severity of illness, patients' emotional response and attitude, on the perceived family burden in the spouses, and life events, among the three

diagnostic groups of alcohol dependence, schizophrenia and bipolar disorder. All three groups were recruited simultaneously.

REVIEW OF LITERATURE:

CAREGIVER BURDEN IN MAJOR PSYCHIATRIC DISORDERS:

Alcohol has been used since ages as a agent for recreational purpose. Long-term alcohol use result in physiological changes in the user's brain like tolerance and physical dependence. These changes maintain the urge, salience, and loss of control, resulting in withdrawal syndrome if discontinued. In India, marital disharmony, domestic violence, financial difficulties from work avoidance and misappropriate of the income to alcohol, and physical complications in the patient are perceived both as immense stresses and psychological abuse by the female spouses. These burden and alcohol-related negative life events make the latter live an unpredictable and uncontrollable life. They become overwhelmed with the burden and the persistent agony and frustration leading to depression and other anxiety disorders due to the perennial nature of those stressors. Hence spouses of alcohol dependent individuals are in need of professional support and help[80].

Room et al[74,] Muller-Leimkuhler et al identified in their study major predictors of burden for a 2 year study period framed on a transactional stress model (with both subjective and objective burden subtypes). Neuroicism, expressed emotion, life events, and generalized negative stress response were the most important predictors of burden in those 60 subjects.

Alone et al. found in a study on caregiver of persons with severe psychiatric illness in Western Australia that loss of personal freedom, and distressing dimensions. Goldstein,[109] and Richard et al while describing the subjective burden experienced by domicile caregivers in a multicentric study in Canada, found the treatment history and adherence influence significantly the variance in burden scores.

Jones et al described in a longitudinal, quasi-experimental study of 3 year period, the association between objective and subjective burden. Overwhelming demands and the resulting embarrassment and interpersonal conflicts increase subjective burden[144]. With increased burden in schizophrenia, quality of life decreases with more deterioration in caregiver's health condition.

Wang PS, Lave M and Olfson M studied 9282 respondents' general use of mental health services in the US again in 2005 over an 1 month period either without any treatment or insufficient and poor treatment. This was more so among low income groups, ethnic minorities, and residents of rural areas: They had used "Composite International Diagnostic Interview" of Survey-initiative version of WHO. They also showed urgent need to enhance imitation of treatment and to maintain a standard quality of treatment and the importance of family in adhering to the available treatment[145].

Chun and Ying-Yeh studied in Chinese caregiver's of mentally ill the risk factors associated with family burden and quality of life. They found burden to be significantly correlated with duration of time spent in care per day, irrespective of other socio-demographic variables. Different psychiatric disorder showed almost similar burden levels, and lower quality of life correlated with higher burden scores significantly impairing the letter[146].

Importance of family in appropriate treatment and adherence:

Studies like Texas Medication Algorithm Project (TMAP) (Miller et al[106]) Proposes educational program to families for implementing specific and individualized and algorithm guided treatment, or guidelines, for better patient outcomes (symptom improvement) in schizophrenia, bipolar disorder, and major depressive disorder. Best practice guidelines need the participation of the primary caregiver in monitoring symptoms, compliance, and side

effect burden to inform the medication panel at clinic visits, forming the pivot in critical decision points. Project also found out other significant domains potentially affecting treatment adherence and hence outcomes

(a) the need for seeking professional care ----(baseline symptom score and age)

(b) predisposition to seek care --years of education – and patient's perception of benefits

(c) enabling factors --family size, and disposable income, and

(d) demographic items –ethnicity, race and sex.

Due to the high depressive symptoms prevalence in chronic schizophrenia (Siris et al[121]), the Texas Medication Algorithm Project considered it is useful to incorporate comprehensive recommendations Alexander L.Miller et al.[106] in assessing it in algorithm –guided treatment procedures. Similar projects demonstrated cognitive improvements emphasizing the importance of family support monitoring in care and adherence. This improvement is a substantial benefit for the patient, because cognitive deficits contribute immensely to the functional and social impairment in persons with schizophrenia as per green and Velligan et al[122]

RESILIENCY AND VULNERABILITY:

Coping ability, better self-esteem, optimism, confidence, and awareness of the limitations, and the self-limiting nature and prognosis of the illness, help the caregiver deal with the long drawn illness as well as manage crises in event of life-threatening behavioural complications. Dependent, anxious, schizoid, and schizotypal personality profile may affect the willingness to take up the position as a caregiver, and the comprehension of the need to dwell in with the expected responsibility. Self-esteem buoys up optimism allowing executing caregiving with ease and flair.

Persistent enduring burden that is uncontained, progressively inflated without any prompt measures of de-escalation, dries out caregiver's coping repertoire and gives a sense of insufficiency and vulnerability. Bouncing back from transient insufficiencies in managing burden is an innate strength denoted by "resiliency". When acutely overwhelmed with significant life events, vulnerability prevails and the perceived colossal mental fatigue and the worn-out confidence result in a burnout.

EFFECTS OF CAREGIVER BURNOUT :

Burnout can be explained as an acute stress reaction which is typically characterized by exhaustion from overwork, presenting with a sense of being overwhelmed, fatigue, anxiety, depression, insomnia and impairment in work performance(Oxford Dict. of Psychology, OUP, 2006).

The concept of burden superficially encompasses caregiver burnout too, but the latter personifies in itself overall perception of a global depletion of resources, insufficiency and helplessness, and is interlinked with positive self-esteem, optimism on future, and appreciation of life. In negative state these have direct bearing on the caregiver's mental health and contribute to the development of depression over time. Depression in particular may precipitate a vicious cycle of low self-esteem followed by a perceived insufficiency in care, then trivial shortcomings in care, resultant guilt, worthlessness and reinforced low self-esteem, and have a negative impact on the carer with worsening depression, and patient outcomes. The chronicity, the relentless course of these illnesses, and the never-ending caregiving, are pertinent with the cumulative growth of burden and the above consequences.

Studies show that with gradually emanating subjectively perceived insufficiences in the caregiver satisfaction and selfesteem the primary caregiver tend to compensate with immature mechanisms including emotional over involvement (EOI), and expressed emotions

(Johnkeefe et al[98]), although the latter is also more common with irritability and impatience due to the caregivers' personality profile.

Family Burden in Carers of Schizophrenia:-

In EPSILON (the European Psychiatric Services: Inputs linked to Outcome Domains and Needs), a cross-European study formed identical burden rates among caregiver in England, Spain, Italy and Netherlands, but increased levels in greater period of time spent with the patients with schizophrenia[34].

Perlick et al. studied 623 family caregiver for a 2 year period using the baseline data of CATIE[37,100] (Clinical Antipsychotic Trials of Intervention Effectiveness) study evaluated the components of caregiver burden in Schizophrenia. Founded by National Institute of Mental Health and completed by 2003, elaborated on association of burden with illness severity, quality of life, cognitive functioning, drug side effects, compliance attitude, treatment duration, and intensity of current management. Routine disruption and resource demands, problematic behaviour, functioning level of activities of daily living and perceived support from patient were the burden domains dealt within the Family Experience Interview schedule used. In descending order, the caregiver age, duration of illness, financial state, and symptom severity were the strongest predictors in all four domains of burden. Problematic behaviour positively correlated with positive symptoms dimension while activities of daily living domain positively correlated with negative symptoms. Disruption in routine significantly correlated positively with both dimensions. Symptoms had no effect on the support from patient domain.

Apathy and other negative symptoms in the patient profoundly contribute to the spouse's perception of appreciation of care on behalf of the patient. Those psychiatric and neurological conditions[125] involving frontal/subcortical dysfunction with similar negative

symptoms[124] have been recognised recently; apathy refers to a reduced interest, involvement in interpersonal relationships, initiative, and lack of concern, indifference, and flattening of affect. It poses difficulties in care and also in clinical management; contributes profoundly to the burden of care[125] with negative outcomes over time. Studies[123] involving neuropsychiatric disorders showed in the west that the caregiver burden was significantly higher in the Parkinson's and Alzheimer's disease[126], with severe apathy group; these patients had lack of awareness of their own emotional blunting , and appreciable lack of initiative. similar studies with patients of other neuropsychiatric illnesses in India showed higher caregiver distress levels correlating with apathy in the patients.

Caqueo-Urizar and Gutierrez-Maldonado used Zarit Burden Scale[97] and found greater levels burden in caregiver with more age, unemployment and less education, and in these caring younger patients with Schizophrenia[40] in 41 Chilean caregivers.

Magana[41], Garcia Cortez and Hernandez found in 85 latino caregivers of persons with Schizophrenia that prevalence of depressive correlated more positively with young, less educated carers and those with higher stigma and burden levels, and also with those caring role psychotic patients[41]. The study had used Zarit Burden scale. Dyck et al. studied burden and caregiver health---assessed with frequency of infections illness against caregiver stress vulnerability and caregiver's resources. Severity of negative symptoms of the patient, anger control, and poor tangible social support, predicted, burden severity. Results did not show any correlation with infectors, but positive correlation with depression and stress perceived.

Lloyd et al. evaluated burden among Sikh and British parents of persons with schizophrenia. It was a cross-cultural cohort-study showing low burden scores in both groups. Psychotic behaviour subscale score was increased more in Sikhs [44].

Chien et al. in another cross cultural descriptive study with 203 random sampled caregivers in Hongkong using the 25-item "Family Burden Interview Schedule"—FBIS, 60-item "Family Assessment Device- FAD, financial status correlate with all these scales[43].

Interview by Baronet on 28 studies family burden and mental illness more than 50% were parents, about 25% were spouses[42]. Poor patient interaction influenced subjective burden the most, while caregiver tasks affected objective burden.

Lanzara et al observed in 203 caregiver of persons with schizophrenia affective disorder, severe family burden in about 33% relatives predominately in social relationship. Interstingly, the duration of contact with the patient, social support, and positive and manic symptoms in the patients did not correlate well with carer burden, unlike the patient's disability levels[45].

Sunil Srivastava used the 9 factor "Burden Assessment Schedule" –BAS to comprehend the burden perception by 34 caregivers of patients with schizophrenia. Patient support, caregiver routine, Mental and Physical health, taking responsibility, and effect in other relations were the domains showing atleast some positive correlation with urban domicile, and younger caregiver age (<30 years)[46].

Kumar and Mohanty in their study used Burden Assessment-Schedule on 70 spouses of persons with schizophrenia and found significant association with female gender and type of family, on family burden. Female caregivers exhibited more fatigue, frustration, anxiety; and isolation. Additional financial, treatment, caring and social responsibilities over and above the domestic roles added to the excess burden[47].

Trivedi et al in his study found interestingly more burden levels among siblings apart from the expected in parents, as against the spouses. Middle age group and illness duration both had positive correlation with family burden[49] in caring for persons with schizophrenia.

Muser and Provencher analysed the association between “perceived” and “attributed” responsibility and both of negative and positive symptom –behaviours and family burden. Self –reported scales from to chief carers of persons living with schizophrenia, showed that the severity of symptom behaviours correlated positively with subjective burden, while the negative behaviour responsibility negatively correlated with objective burden. Managing the disruptive behaviours like social withdrawal, bizarre –ideas and violence in the patients had the most impact on the caregiver burden[50].

Martin-Yellow observed that rural domicile influenced financial burden, and more social deficits influenced caregiver of male patients, while stressor severity influenced financial burden, stressor severity influenced caregivers of female patients significantly[48] while caring for the schizophrenic group.

Raj et al pointed from their study that negative symptoms significantly correlated with family burden, than the positive symptoms in spouses caring for individuals with schizophrenia. But Mueser et al deduced that there was no such association in their vignettes. Gopinath and Chaturvedi determined that the higher the caregiver educated the more distressed she was, especially in the “negative symptom behaviour” group[51,52,53].

Andren and Elmstahl studied in Sweden the association between low income, caregiver burden, and subjective health in people with dementia lower income was the most implant external factor influencing stress in a primary caregiver[54].

In 315 Taiwanese caregivers, Chii and Hsing-Yi et al. analysed the association between family burden and “perceived” social support. Caregiving mileu was found to be an important dimension in determining this social support. There was also a significant positive correlation between the number of hours care provided and the family burden. The social support and family function slowed a negative association[55].

In a Japanese cross sectional study on the factors influencing burden of carers of mental illness, Fujino and Okamura concluded that disability in daily and social activities determined carer burden levels. Patient’s behaviour and the chronicity of the illness determined his dependency on the caregiver[57]. Kumari S et al used FBIS (Family burden Interview Schedule) in a sample of 50 persons living with schizophrenia, and showed no appreciable difference in the moderate level subjective burden found in both groups[58]. Juvang and Lambert deduced a positive correspondence and the caregiver’s objective burden. The younger the patient more was the subjective and demand burden[56].

Talwar P et al did a research on the perceived burden levels in 50 Indian and Malaysian families of persons with schizophrenia and its determinants. In this study by purposive sampling, Indian carers perceived lesser burden than Malaysian carers, but they had predominant difficulties in physical health, finance and relationship with other family members[59].

Family Burden in Bipolar Mood Disorder:

Even though this is not a continuous illness, the cyclical nature of bipolar affective disorder tend to force wear and tear on the carers over time[68].

Hirschfeld et al. concluded in 2003 that relationship with other family members including interpersonal conflicts, marital disharmony, work and school related issues,

physical and mental health, and substance use including alcohol were the frequently encountered problems in bipolar disorder National Depressive and Manic Depressive Association Survey 2000[69].

Tsuang et al. found one third of patients with episodes having poor adjustment and performance at work and other areas of social interaction in a long term study over a 30 years period[70]. It was reported in US that women with illness onset at or before 25 years of age lose a mean of 9 years of life, 14 years effective productivity and 12 years of normal health when treatment is insufficient.

Perlick, Clarkin et al. assessed 1934 caregivers of bipolar affective patients using SBAS—Social Behaviour Assessment Scale their subjective and objective burden experienced over the past 7 months; over 91% found her burden with problem behaviour, social dysfunction and 82%with the impact on carers work and leisure, were studied. Misery, irritability and withdrawal were the most frequently complicated distressing behaviour. About 93% reported at least a moderate levels of burden in at least one domain, 33% in at least two domains, and about 13% complained burden in all domains. Liam Davenport analysed the course of illness over one year, and also the burden using the SBAS (Social Behaviour Assessment Scale), in 500 primary carers of persons with bipolar affective disorder. Recent episodes of subjective family burden appreciably than the manic or mixed episodes, especially in the following domains lesser symptom-free period in past 1 year, depressive symptoms-score, carer living with the patient, and the social-economic state of the patient[61].

In the Ostacher et al study the highest and enduring impact was on the carers who involved more intimately with the bipolar depressive patients. The study analysed the

association between the individual episodes and the reported burden in 500 primary carers over one year[63].

Ogilive et al explained about the influence of previous health service experience on the caregiver's belief and approach to the illness. Carers of bipolar patients had higher expressed emotion levels with over involvement or hostile and critical attitude. Subsyndromal inter-episode depressive symptoms also contribute to the persistence of the severe burden. Also caregiver burden when severs enough to cause depression, adds more stress to the milen and affects the recovery of patient. Burden was higher significantly in bipolar group than in unipolar depression[62].

In an 1 year cohort-study by Zergaw et al. on family burden among carers of 190 bipolar disorder patients, along with 55-hypertension, diabetes mellitus, asthma patients, and 659 controls, to analyse changing pattern of burden overtime. As expected bipolar group shared more burden levels—for a mean of 9 months of the year of study[64].

Wang et al.[145] proposes causes of high financial burden in mood disorder:

(a) they are chronic illness with consistently onset than other conditions of similar prevalence
(b) this cumulatively adds up to substantial financial losses and patients caregiver and family productively –time drain is the cause in carers
(c) Huge decrements in multiple dimensions of work performance occur in mood disorders aggregating to larger losses. This is because the mood disorder frequently strikes even before and during the prime productive years.
(d) Further reasons include lesser number of people with affective disorders receiving sufficient care, which also affects drug compliance and treatment structure adherence, affecting the clinical and social outcomes overtime.

In the National Health Interview Survey NHI in the US, a 40% lesser employment rate was found in people with bipolar disorder.

Comparative studies of burden in major psychiatric illness:-

Using Pai and Kapur's FBIS (Family Burden Interview Schedule) Vohra et al. brought out a study on burden among schizophrenia and depressive disorders, and found no significant difference between them. It also showed high scores in disruption of routine, financial state, family leisure and interaction[65].

In a comparative study between 32 primary caregivers of persons with schizophrenia and 32 caregivers of persons with intellectual disability, Pariante and Carpiniello found non significant differences in family burden, with the schizophrenia group on the higher side both in subjective and objective types of burden. Lack of leisure time, and presence of restricted recreation and social relationships, along with emotional distress were the problematic domains. Financial difficulties were perceives more in the schizophrenia group, while problems with neighbours were more in the caregivers of persons with intellectual disability[66].

In a study comparing psychosocial dysfunction and extent of burden in schizophrenia against obsessive-compulsive disorder, Thomas JK et al., had assessed 35 primary caregivers mainly spouses of schizophrenia patents and 30 of OCD patients using DAQ (Dysfunction Analysis Questionnaire) and FBIS. Dysfunction was equivocal in both groups in social area. But schizophrenia group had significant a corroborative correspondence and correlation dysfunction and burden in vocational, familial and global areas in DAQ, and in subjective, financial, family-routine, leisure, family interaction and global areas in FBIS[71].

In a similar study between 30 schizophrenia and 50 OCD patients in India patients severity of illness positively correlated with burden severity, and caregivers' social and demographic profile had no significant effect on burden levels. Overall burden was again comparable between the two groups[67]

In a Chadda Rakesh et al. assessed burden and coping in caregivers each in clinically stable schizophrenia, and enthymic bipolar patients, and reassessed after 3 and 6 months. Burden Assessment Schedule (BAS) and a local adaptation of ways of coping WCC checklist were used. Family burden was stable over the study period, and comparable between the two caregiver groups. Both groups used similar coping methods in dealing the elevated burden.[127]

Similarly Chaudhari[105,58] et al analysed burden among carers of persons with schizophrenia and bipolar disorder. The schizophrenia group had higher family burden, and gender-male younger age, unwaged and under waged lower payscale, were major factors. The study showed comparable coping resources between the groups[105].

Chakrabarti et al[5] compared the pattern and extent of family burden between 60 caregivers of schizophrenia and 78 caregivers of bipolar affective disorder or recurrent depressive disorder. Younger age and single status were important factors towards the higher subjective and objective burden in the schizophrenia group. Both groups felt similar pattern of burden more in the family routine, finance, leisure and family interaction dimensions[3]. FBIS (Family Burden Interview Schedule) was used an relatives with atleast 3 years caregiving duration. Patient care severely depleted the family monetary reserves and taking to loans was more frequent. Carers had frequent mis comprehensions among themselves regarding the demands and the optimum involvement in tension and irritability from these. Psychological health was affected in many with sleep disturbance, loss of appetite and worrying frequently.

Mueser et al. analysed the family burden due to problem behaviours of patients with bipolar disorder and schizophrenia, and compared with the objective assessment by the mental health professionals. 48 primary caregivers were administered on a questionnaire regarding 20 problem behaviours ranging from positive, and negative, to manic symptoms, where the latter was perceived most burdensome. 39 professionals reported almost accurate objective burden levels, but tended to opine lesser levels for positive and negative symptoms [53].

BURDEN IN PSYCHIATRIC ILLNESSES:

Since 1960's family burden due to mental illness in research studies, with an ever-increasing domicile model of managing the patients in the community of their own,[25] minimizing unnecessary hospital stay. This helps sooner recovery, but simultaneously increases burden on the other members of the family and community.

In a study by Mills, only 12% of caregivers denied any practical difficulties, Risk of violent or suicidal behaviour and problems with neighbour, raised the burden levels, and caused anxiety, sleep disturbance to the relatives. Odd and, disinhibited, or a pathetic behaviour, caused more difficulties than daily routine. Poor communication in patients was associated with higher burden than express talk[35].

Fadden G, Bebbington P, and Kuipers L reported vague complaints like frustration, preoccupation and depressive mood of the patient were more often recalled by the caregivers. Female spouses experienced isolation and defection due to lesser modes of relief and begin forced into the role of a family head[38]. Though they managed with competence financial deficits and restricted leisure time increased the burden significantly. The female also had to compensate for and in place of her husband in the family's social performance. The carers had a sense of doing larger than their fair share, in maintaining the marital relationship.

Mandlebrate and Folkard repoted more distress from patients support and behaviour in caring for husbands, resulting in frequent marital conflicts while similar distress was found in caring for mothers. Role function and greater dependence factors dominated burden levels and brought on anxiety disorders in the female spouses caring for male patients with anxiety disorders.

Persons with major psychiatric disorders presented more distress and burden to their caregivers than persons with neurotic disorders in a community study by Grad and Sainsbury. Over 65% of the families felt caregiver routine and patient's behaviour were burdensome Aggressive, psychotic, withdrawn and confused behaviour along with poor self-care were troublesome[36,37].

Negotiating crisis, situations, procuring sufficient community resources, care continuity and interaction with mental health professionals were found to cause profound burden in 86 caregivers studied by Francell, Conn and Gray[39]. Goldberg et al in a longitudinal study found many bipolar patients not having expected remissions and favourable outcome overtime. Compared to unipolar group psychiatric patients had poor functioning at more, poor outcome and frequent hospital admissions[73].

SPOUSAL BURDEN IN ALCOHOL-DEPENDENCE SYNDROME:

Potentially life—threatening consequences to the patients to alcohol dependence include longterm harm to physical and mental health, addiction, injury from traffic and similar causalities, and interpersonal and social fallouts in family, occupation and other areas[74,77,78].

It has been acknowledged that family and psychological problem are related consequence to alcohol dependence[75]. Hasin, Grant et al. elaborated the association of

increased in age, hospital admissions, depression, and lesser antisocial traits, with alcohol dependence[76].

Velleman, Bennett et al. reported spouses complaining more violence, threatening behaviour, pressing for money, unpredicted affective changes and property damage, while parents complained self-neglect, lying and manipulation[78]. About 82% of the spouses exhibited momentary negative emotions like feeling fatigued and drained, unsupported and isolated, tense, apprehensive, worried and anxious, guilty, tearful, suicidal and depressed, or confused and fearful; 94% worried about worsen and relationship with patients, arguments and conflicts and miscommunications, poor intimacy and sexual motions; 88% reported negative pragmatic changes due to patient's behaviour like restrictions in social interaction, financial state, altercations in occupation, and discovering altered family roles; 82% spouses reported long-term and enduring negative emotions like impact on physical health including stress ulcers, shingles, hypertension, and mental health including panic attacks, nervous break down, anxiety and depression[78]

Room, Bondy et al studied harmful effects of alcohol dependence in different milieu. Patients less frequently reported harm to family life or marital relationship or education or employment opportunities or work related interaction[79].

Bhowmick, Tripathi et al[24] reported that more presence persons with alcohol dependence within the family was perceived by the caregivers as the cause for restricted leisure activities, finances and social and financial relationships. Degree of tolerance to the patient behaviour determined the perceived stress. The crux of the caregiver's energy is spent on the patient, resulting in co-dependence. Creativity, sexual urge, and personal needs were suppressed; and the privilege of exuberant or subtler release of aggression erupting from continuous and repeated submission, needed to be restrained; this for a period ill-guessed and

unaware, or partially comprehended in subtlety, or intellectually discovered, to be indefinite at the maximum, extending till the end of life of either of the two artists –the carer or the cared.

The female spouse is rather rammed on by the drastic degradation in his daily, functional and vocational abilities, and finds herself shoved off usually unwillingly into an altered role that of the head of the family. Like a professional ballerina –she has to bear the colossal expectation of her in-laws and the society, to swirl around dragging her man a worn-out and bound liability simultaneously balancing her life and avoiding the collapse of the shadow of his previous self, with a zero-allowance for even an occasional fleeting emotional tripping.

Such processes impact on the development of one's emotional, cognitive and spiritual aspects, turning one prove to stress and related psychiatric diagnoses over time. Financial and legal encounters were prominent stressful life events in persons with alcohol dependence[24].

SCALES USED IN STUDIES IN ASSESSING BURDEN AND CONTRIBUTING FACTORS:

Burden have been assessed with many scales with subtle variations –like the Family Burden Interview Schedule –FBIS, Social Behaviour Assessment Scale –SBAS, Family Attitude Questionnaire –FAQ, Burden Assessment Schedule –BAS and others in different studies. Usual domains were caregiver routine, leisure activities, financial responsibility and family interaction.

Other scales with more intrusive perception on negative emotions include Caregiver Reaction Assessment—CRA, Appraisal of Caregiving Scale, Bakas Caregiver Outcomes Scale, Caregiver Burden Inventory, Caregiveing Burden Scale, Caregiver Impact Scale,

Caregiver Strain Index, Caregiver Well-Being Scale and Zarit Burden Interview. Zarit Interview and Caregiver Strain Index were the frequently used scales especially in neuropsychiatric conditions including dementia.

Coping strategies were also studied in several studies in caregivers using COPE inventory, Freiburg Questionnaire on Coping with Illness, and other scales. Apathy in the patient had been studied by Marin's and Starkstein's diagnostic criteria, Apathy Inventory, Apathy Evaluation scale, and others.

Involvement Evaluation Questionnaire—IEQ (van Wijngaarden1[10] et al), Experience of Caregiving Inventory - ECI(Szmukler et al, Joyce et al), Neuropsychiatry Inventory Caregiver-Distress Scale—NPI-D(Kaufer et al), and Negative Caregiving experience scale—NCE, are scales probing negative experiences in caring.

Structured clinical interview like SCID – I & II, CIDI of WHO, SCAN, MINI and MINI-plus have been used to assess psychiatric morbidity of individuals in many studies. WHOQOL—BREF-1 is the most commonly used scale for assessing quality of life.

Subsyndromal affective symptoms had been assessed by (Goldstein et al[109]) with" General Behaviour Inventory " —GBI in a study in 66 non biological relatives, to compare expressed emotion—as measures by "Camberwell Family Interview" (CFI). Emotional over involvement was noted in caregivers without any psychiatric illness in themselves.

CAREGIVER BURDEN OF CARE IN PSYCHIATRIC DISORDERS:

The spousal caregiver population is incessantly multiplying with psychiatric illnesses that are increasingly more common in the recent decades affecting over 25% of people at some point in a adults at any point in time with at least one affected individual living in one every four families[1,147]. Spousal burden had been chronically chronicled invariably in most

cultures, in alcohol dependence syndrome, the maladaptive pattern of alcohol intake with tolerance craving, loss of control, and withdrawal symptoms[26]. Bipolar affective disorder is episodic in nature with manic or hypomanic or depressive or mixed symptoms occur. Patients exhibit fluctuating severity of any of these symptoms interspersed with a symptom free(euthymic) or subsyndromal periods. Currently the prevalence of bipolar affective disorder is around 0.4-0.5% with an 1 year prevalence of 0.5to 1.4% and a life-time prevalence of about 2.6 to 7.8%[27]. The life-time prevalence of bipolar disorder is about 20.8 per 1000 population in India; and that of alcohol use ranges from 1.15% to upto 50% in general[31,32].

Stigmatization, chronic emotional and economic burden from caring are endured by the families of individuals with major psychotic illnesses. The illness impacts on the primary caregiver's leisure time activities work and social relationships. These deficits evoke different reactions indifferent or expressed emotional reaction towards the patients, and a sense of insufficiency and helplessness in themselves, all of which impact on the progression and prognosis of the patient's illness.

Continuing evidence reveal immense burden on the society due to mood disorder – financial losses from work impairment in bipolar disorder account for the majority of proportion even more than the losses from costs of treatment and suicidal accounts.[12]

BURDEN AND DISABILITY IN PATIENTS AND CAREGIVERS IN PSYCHIATRIC ILLNESSES:

Mental illness was recognised as one of the important causes of disability in the persons with disabilities Act—PDA enacted in 1995 and came into force since February 1996. In India, as per the "National Sample Survey organization"–NSSO statistics, mental illnesses account for over 30% of disability, and 1.9% of the general population is disabled in

any one way. Among the mental disorders major depressive disorder, alcohol use disorder, schizophrenia, bipolar affective disorder and obsessive–compulsive disorder are top 5 of the leading cause of disability. Bipolar disorders constitute the sixth rank in the causes of disability in the middle age a group[147]. They negatively impact on the scholastic, vocational, familial and community functioning of the patients. Chaudhury et al. also found that these patients had deficits in the selfcare, communication, comprehensibility, interpersonal relations and work dimensions[105]. However the consequence from them like frequent unemployment, poor productivity work, frequent work absenteeism (illness-related), lesser income, community dependence, shortened lifespan and increased assaultive and suicidal behaviour were the most disabling aspects as per spouses.

Alcohol is in the top 10 ranks among the diseases causing excess burden. The project GBD-"Global Burden of Diseases[147]", gives –attribute 3.5% of total DALYs--"Disability-Adjusted Life-Years", 1.5% of total deaths, and 2% of total life-years-lost to alcohol use disorders. This burden included disorder per se and the burden from physical complication and traffic and occupation—related injuries resulting directly due to the use of alcohol. A high economic cost is imparted on the family and the community. Studies in developed countries estimated the economic burden from alcohol –related problems putting the cost at 1% of GDP—"Gross Domestic Product".

PSYCHIATRIC MORBIDITY IN FEMALE SPOUSE:

In alcohol dependent patients group, the great varying stressors manifest as subsyndromal psychiatric symptoms or as a diagnosable disorder in female spouses. Western studies have shown that wives with a family history of similar alcohol dependence persist more with the marital life with the patients and those with no such similar family background and those with an indifferent personality structure were more likely to leave the alcohol

dependent husbands; the latter group as caregivers had increased psychiatric morbidity in Indian setting.

Hinkin and Khan concluded in their study that female spouses of patients with major psychiatric disorders had lesser psychiatric symptoms in comparison with those of alcohol dependent patients, significantly[81] impairing functioning in marital milieu, and that the psychological metamorphosis in primary caregivers pose challenging difficulties to research.

Tran et al. in a cross-sectional study in 230 Vietnamese antenatal spouses from rural and low-income backdrop, and found alcohol dependence in their husbands was significantly affecting their mental health. Increased incidence of perinatal psychiatric illnesses was more particularly associated with violent behaviours by their husbands[91].

In a large study in a metropolitan city in a comparable developing country similar to India, involving 2083 spouses with alcohol dependent male individuals from, Sao Paolo in Brazil, Prado-Kerr-Correa et al[90] found depression in 28.3% of woman, and revealed that the rates were in contrast from psychiatric morbidity in male spouses of alcoholic females[77].

Selwyn Stanley in 2012 found higher levels of “interaction apprehension dimension and perceived danger in marital relationship”, warranting therapeutic intervention for improving family communication[89].

Kachadourian et al. in their study correlated aggression in spouses to the alcohol dependence in their husbands[87]. Merinov et al. reported that the spouses of alcohol dependent males with suicidal behaviour when compared with a non suicidal group, exhibited more co-depending and more prevalence of predictors of suicide in spouses[86].

Nagalakshmi and Suman used FIS–Family Interactional scale to assess 40 families with alcohol dependents with those of non alcoholics, and found prominent poor role

functioning domestic abuse on spouses, lesser mutual support and warmth and abnormal communication, and predominant dissatisfaction expressed by the spouses in those areas[82]. This was contradicting the study of Brennan, Penny et al. who reported among spouses of 87 late problem drinkers, poor social functioning, physical health, distressed family interaction and support, and the use of more avoidance coping mechanism[83].

Ponnudurai and Jayakar in their study on suicides in Madras(Chennai) found 12.5% of female suicides was associated with poor adjustment with their alcohol and substance abusing husband[26]. The result reinforced with larger studies by the same authors. Other studies also showed the experienced excess emotional distress from familial and social strains may lead to suicide among female spouses in this part of South India.

Dasgupta, Battala et al. studied spousal depression and its association with social support, harmful drinking and violent domestic behaviour in 220 couples in low socio economic community from the slums of Mumbai in 2012. Perceived high social support was inversely proportional to the incidence of spousal depression inspite of violent behaviour by alcohol dependent husbands. It proposed building of a community-based institution to promote social support in the spouses to mitrgate the risk of depression[88].

Madhabika B Nayak, Patel V et al. in a population based study in 2010 involving 821 spouses from Goa, analysed the prevalence of common psychiatric illnesses in them and the partner alcohol consumption, and found twofold an increase in the rates and the association of mental disorders and violence-related attitudes in spouses[85]. Manohar PS and Kannappan R in 2010 found the association of spousal suicidal risk, domestic violence and alcohol dependence in the husbands. Using suitable scales on 32 spouses compared with a control group[84].

In this background burden, quality of life and psychiatric morbidity and factors influencing them, are planned to be assessed in this study in female spouses of patients with alcohol dependence and bipolar disorder and schizophrenia.

AIM

To compare the family burden, the quality of life and psychiatric morbidity between female spouses of patients with alcohol dependence syndrome, patients with schizophrenia, and patients with bipolar affective disorder.

Hypothesis

There will be no difference in family burden and quality of life on the caregivers in patients with Alcohol dependence syndrome, Bipolar affective disorder and schizophrenia.

There will be no difference in psychiatric morbidity between the caregivers in patients with Alcohol dependence syndrome, Bipolar affective disorder and schizophrenia.

OBJECTIVES:

1. To estimate the family burden and quality of life, in female spouses of patients with alcohol dependence, schizophrenia and bipolar affective disorder
2. To assess the psychiatric morbidity, in female spouses of patients with alcohol dependence, schizophrenia and bipolar affective disorder
3. To compare family burden, quality of life and psychiatric morbidity, between the female spouses of patients with alcohol dependence, schizophrenia and bipolar affective disorder
4. To study the association of severity of illness in patients, apathy of patients as perceived by spouses, and significant life events in spouses, -with the family burden, the quality of life and the psychiatric morbidity in female spouses, between these three groups.

MATERIALS AND METHODS :

SOURCE OF STUDY SAMPLE:

The sample for the study is drawn from male patients with female spouses attending the outpatient Psychiatry department at this tertiary care hospital.

DESIGN:

Crosssectional, comparative study

SAMPLE:

With consecutive sampling of 64 male patients with alcohol dependence, 64 male patients with schizophrenia, and 64 male patients with bipolar affective disorder, and their spouses who fulfil the following criteria; a total of 192 patients with their spouses were taken up for the study.

Sample size: Sample size is calculated using the formula:

Assuming $\alpha = 5\%$, $\beta = 20\%$, the S.D. (σ) = 5 the difference between any 2 means

(Δ) = 3 previous study[5].

Sample size (N) = $2(Z_\alpha + Z_\beta)^2 * \sigma^2 / \Delta^2$. N = 64.

Thus 64 cases in each comparison group.

INCLUSION CRITERIA:

1. Male patients with equal to or more than 10 years duration of alcohol dependence or schizophrenia or bipolar affective disorder, satisfying the criteria for their corresponding ICD10 diagnoses
2. Female spouses who are providing care for the patients for equal to or more than 10 years
3. Patients and spouses aged 20 years and above
4. Patients and spouses who provide informed consent for the interview and assessment, for themselves and for their spouses to be assessed

Exclusion criteria:

1. patients with any other psychiatric illness (other than their index group)
2. patients and/or their spouses with any chronic general medical or neurological illness
3. spouses with a history of substance abuse, suicide or previous history of psychiatric symptoms and intervention
4. spouses with a family history of psychiatric illness
5. spouses related to the patients by consanguinity

METHOD FOR COLLECTION OF DATA:

1. Male patients with alcohol problems and psychiatric complaints who were attending at the Department of Psychiatry at this tertiary care hospital who satisfied the study criteria including fulfilment of ICD-10[112] criteria for alcohol dependence or bipolar disorder or schizophrenia, were included in the study.
2. Individual informed consent - was next taken from patients and their spouses.

3. A semistructured proforma to collect the relevant sociodemographic details and clinical profile
4. Severity of psychiatric disorder in the male patients, measured by:

   -Short Alcohol Dependence Data Questionnaire--SADDQ

   -Clinical Global Impressions--CGI-BP[6] bipolar patients version –severity scale, and

   -Clinical Global Impressions--CGI-SCH schizophrenia –severity scale, for corresponding patient groups.

   Spouses were then assessed with:
5. Presumptive stressful life events scale PSLES[130]
6. Apathy inventory –caregiver version[123]
7. Burden Assessment Scale BAS[4]
8. WHO Quality Of Life WHOQOL BREF[72]
9. General Health Questionnaire GHQ-12[111] version was used to assess the consent providing female spouses to identify probability of a psychiatric disorder in the spouses.
10. For GHQ12 positive female spouses are further assessed with MINI plus 5.0.0 v Mini International Neuropsychiatric Interview–plus for the presence of psychiatric disorders.

    Similarly for the GHQ12positive spouses Beck Depression Inventory BDI-II and Hospital Anxiety and Depression Scale –anxiety HADS-A self-reported scales were administered with Tamil version –duly translated and back-translated by two other doctors.

The primary family care-giver was one who met at least three of the following criteria (108).

- Is a spouse, parent or spouse equivalent.

- Has the most frequent contact with the patient.
- Helps to support the patients financially.
- Has most frequently been collateral in the patient's treatment.
- contacts treatment staff in case of emergency.

INSTRUMENTS USED

Short Alcohol Dependence Data (SADD) Questionnaire[129]:

SADD Questionnaire is an instrument to measure the severity of alcohol dependence. It has 15 items, each item has four choices of response, and they are: never, sometimes, often and nearly always. Each response carries a score of 0, 1, 2 and 3 respectively. Total score of all these items is calculated and 30 and above shows high dependence severity.

Clinical Global Impression CGI-BP[141] and CGI-SCH[134]

Amongst the most widely used of extant brief assessment tools in psychiatry, the CGI[142] is a 3-item observer-rated scale that measures illness severity (CGIS), global improvement or change (CGIC) and therapeutic response. Clinical Global Impression scales have been used as an "actual criteria" as an alternative to BPRS in the Kane's criteria for some time in Western studies,[135] and also used in Indian studies to assess severity of psychiatric illnesses, and also for change in severity[116,117] and improvement during subsequent clinical visits[118,119] and in both clinical and research settings. The CGI-BP[141], a user-friendly scale for the assessment of manic, hypomanic, depressive or mixed symptoms, and long-term outcome of bipolar disorder, is a useful tool for the assessment of the efficacy of several treatments. Correlation coefficients between the CGI-SCH[135] and the GAF and PANSS scores were high (most above 0.75), and were highest for positive and negative symptoms. Reliability was substantial (intraclass correlation coefficient, ICC > 0.70).CGI-SCH scale is a valid, reliable

instrument to evaluate severity and treatment response in schizophrenia. Given its simplicity, brevity and clinical face validity, the scale is appropriate for use in observational studies and routine clinical practice.

Apathy Inventory (IA)[123,136]

Apathy inventory is used in the assessment of: emotional blunting, lack of initiative, lack of interest (based on Marin's syndrome criteria); has both caregiver and patient-based assessments based on the Y/N format; assesses the frequency, severity and handicap and burden, with a total score of 36, and a better reliability than other apathy rating scales (test-retest 0.96, interrater 0.99); it has been validated[126] in Alzheimer's disease, Minimal cognitive impairment and Parkinson's disease patients, and other neuropsychiatric conditions[126,124,125]. It has a concurrent validity comparable with apathy subscale of Neuropsychiatric inventory.

PSLES[130]—Presumptive stressful life events scale (PSLES)

This scale measured 51 life events relevant to the Indian study over the past one year and lifetime of the individual. These events were differentiated as desirable (10 items), undesirable (31 items) and ambiguous (10 items). Based on the original scale, the authors reported that an adult person in India was likely to experience on an average two stressful events in the past year and ten events in a lifetime without suffering any physical or psychological events. The least score of 20 was assigned for a planned trip or pilgrimage and highest score of 95 for death of spouse.

Burden Assessment Schedule (BAS) [4]:

It is an instrument proposed by Thara et al[4] to assess burden on caregivers of chronic mentally ill. It was developed to assess subjective burden in Indian population, as many of

the burden assessment instruments developed in the west were not culturally suited to Indian population. This schedule has 40 items and 9 domains. The different domains are Spouse related, Physical and mental health, External support, Caregivers routine, Support of patient, Taking responsibility, Other relations, Patients behaviour and Caregivers strategy.

Each of these 40 items was rated on a 3-point scale marked 1-3. The responses were not at all, to some extent and very much. In this study the schedule was modified by arranging 40- items into the above 9 domains. The minimum total score of burden in BAS is 40 and the maximum score in 120. In this the severity of burden was categorized into 4 groups, in the following way,

40-60 –Minimum burden

61-80 –Moderate burden

81-100 –Severe burden

101-120 –Very severe burden

World health organization quality of life (WHO QOL) BREF;

WHO quality of life scale is a highly validated instrument, purports to measure the individual's perception of their life in terms of their goals, achievements and satisfaction in their social, cultural and economic background. WHOQOL-100 is a 100 item scale measuring about 24 facets of life, with 4 questions in each. WHO QOL BREF is an abbreviated version with about 26 items measuring the quality of life across four domains viz, physical, psychological, social relationship and environmental domains. The responses range from 1 (very dissatisfied) to (very satisfied). High internal consistency with Cronbach's alpha values were ranging from 0.71 to 0.86 were established in many studies.

GHQ12 –General health Questionnaire

Developed by Goldberg et al[111] it is areliable scale to screen for presence of psychiatric illnesses, simpler to administer, acceptable, with a high validity, sensitivity(87.5%) and specificity(79.2%). The 12-items version is increasingly used recently in primary and community settings, and takes 2-3 minutes. Any score above 2 is taken as a probable case for further detailed assessment. In western studies for example carers of dementia patients showed higher levels of distress as measured by GHQ than carers for patients with depression (Rosenvinge et al., 1998). Coping style was also found to contribute significantly to GHQ score variance, with emotion-focused coping being related to GHQ scores. Furthermore, coping accounted for more of the GHQ variance than disability scores. The GHQ has been shown to be responsive to change in a study using cognitive behavioural therapy in carers of Parkinson's disease patients(Secker[9] and Brown 2005).

MINI-plus[131]

The MINI-plus International Neuro Psychiatric Interview is one of the standardized diagnostic interview used frequently based on DSM 4 criteria. It had 26 modules designed to generate diagnosis for the major psychiatric disorders in DSM 4 and ICD-10. This scale has been used extensively in field research in India and found to have good inter-rater and test-rest reliability[131]. It is fully structured to allow administration by non specialised interviews. There are one or two screening questions in the beginning to rule out the diagnosis when answered negatively. The reliability, sensitivity and specificity have been investigated in clinical studies against or versus the Composite International Diagnostic Interview (CIDI), versus the structured clinical interview for DSM-4 SCID. In all these studies MINI plus was found to be a validated diagnostic scale.

BECKS DEPRESSION INVENTORY

BDI was first described by Beck et al (1961). Over the years, important reviews about the psychometric properties of BDI have been written and stressed various aspects of reliability and validity and also compared BDI with other self report measures of depression. It has been translated in a variety of languages. The BDI – II includes 21 items with total scores ranges from 0 – 63. Scores of 0 – 9 are considered minimal, 10 – 16 mild, 17 – 29 moderate and 30 – 63 severe. It assesses depression in the recent 2 weeks. Internal consistency has been high in a number of studies.

HADS-A - Hospital Anxiety and Depression Scale –Anxiety subscale

HADS by Zigmond and Snaith has been established as a much applied and convenient self-rating instrument for anxiety in patients with both somatic and mental problems and has adequate validity for anxiety-HADS with good specificity(0.78) and sensitivity(0.90), as other commonly used self-rating screening instruments (Hermanns et al, 1997; Bjelland et al, 2001). It is divided into two subscales of 7 items each to assess symptoms of anxiety and depression separately. With a maximum score of 21, scores are interpreted to indicate symptomatology— mild(8-10), or moderate to severe (11 - 21). The internal consistency as measured by Crohnbach's α was 0..78-0.93 for HADS-A(Moorey et al, savard et al).

STATISTICAL ANALYSIS

Statistical software "Statistical Package for Social Sciences SPSS20 version" was used. Results obtained were analysed using descriptive and inferential statistical methods - Chi square test and Spearman correlation coefficients was used for categorical data and one-way ANOVA, univariate ANOVA followed by Tukey's posthoc multiple comparison tests, and Pearson correlation coefficients for continuous data.

RESULTS

TABLE 1 AGE DISTRIBUTION BETWEEN THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

AGE		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
<=35 YRS	Frequency	25	32	26
	Percentage	39.10%	50.00%	40.60%
36-40 YRS	Frequency	26	20	26
	Percentage	40.60%	31.20%	40.60%
41-45 YRS	Frequency	8	5	12
	Percentage	12.50%	7.80%	18.80%
46-50 YRS	Frequency	3	3	0
	Percentage	4.70%	4.70%	0.00%
> 50 YRS	Frequency	2	4	0
	Percentage	3.10%	6.20%	0.00%

Pearson Chi-Square test P value- 0.113 NS(Not Significant)

Most of the patients were less than 40years of age, and the difference was not significant between the groups and so the groups are comparable.

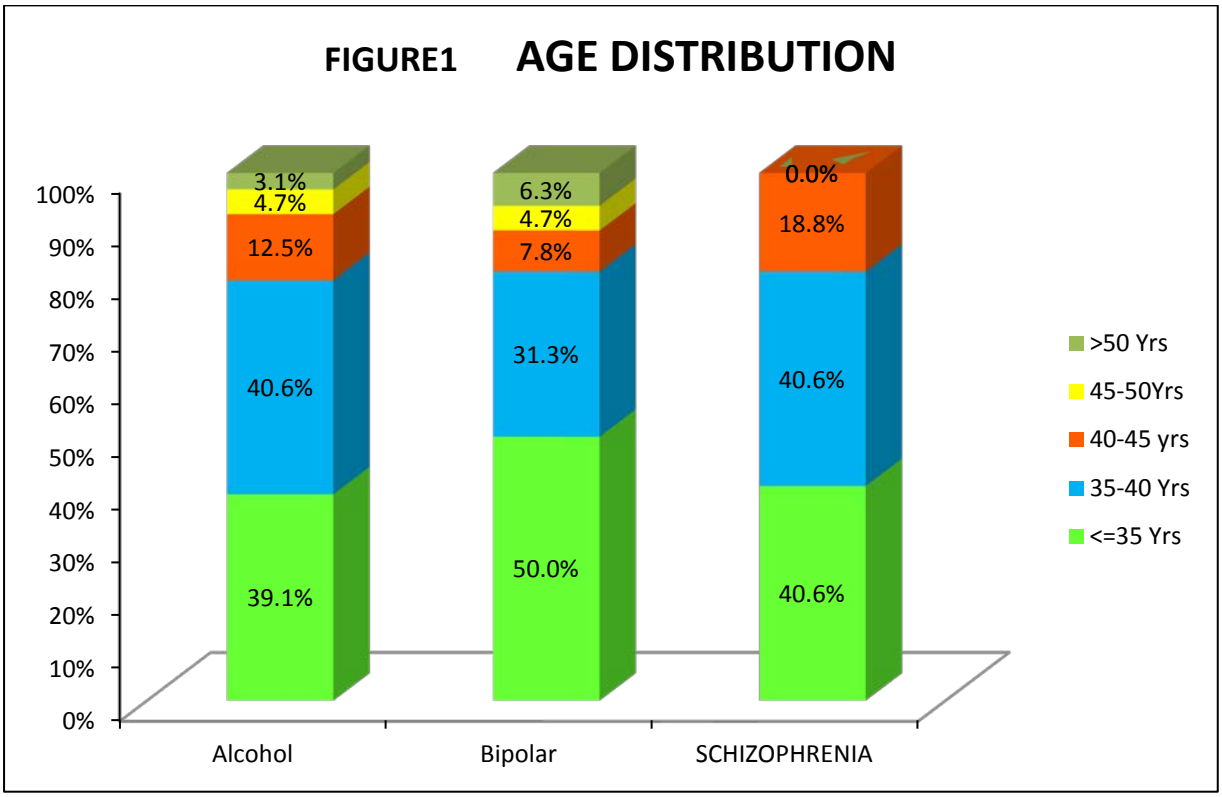


TABLE 2 **AGE OF PATIENTS AND SPOUSES**

		N	Mean	Std. Deviation	95% Confidence Interval for Mean		P VALUE	RESULTS
					Lower Bound	Upper Bound		
Ageyrs	ALCOHOL	64	38.44	5.120	37.16	39.72	.159	
	BIPOLAR	64	37.66	6.360	36.07	39.24		NS
	SCHIZOPHRENIA	64	36.48	5.779	35.04	37.93		
	Total	192	37.53	5.801	36.70	38.35		
Agespouse	ALCOHOL	64	33.89	3.985	32.90	34.89		
	BIPOLAR	64	34.08	5.519	32.70	35.46	.875	NOTSIG
	SCHIZOPHRENIA	64	33.64	4.809	32.44	34.84		
	Total	192	33.87	4.790	33.19	34.55		

Mean age of patients was around 37 yrs and that of spouses was 33yrs, evenly throughout all the groups, any difference was statistically not significant.

TABLE 3 DISTRIBUTION OF RELIGION BETWEEN THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

RELIGION		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
HINDU	Frequency	52	46	48
	Percentage	81.20%	71.90%	75.00%
MUSLIM	Frequency	2	11	6
	Percentage	3.10%	17.20%	9.40%
CHRISTIAN	Frequency	10	7	10
	Percentage	15.60%	10.90%	15.60%
Total		64	64	64

Pearson Chi-Square test P value- 0.113 NS(Not Significant)

Most patients were Hindus across the three groups, and though Bipolar group had more other religions than other groups, the difference was statistically insignificant.

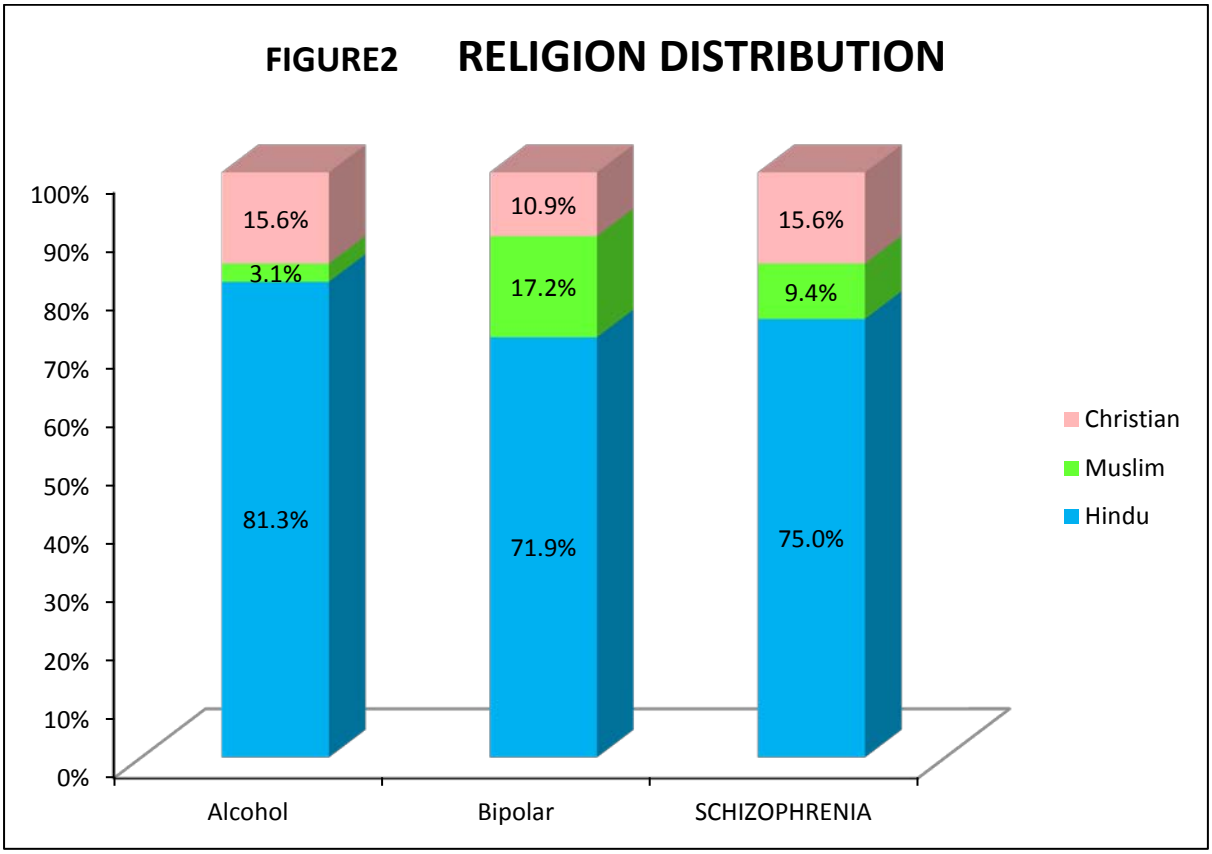


TABLE 4 DISTRIBUTION OF EDUCATION BETWEEN THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

EDUCATION		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
< 5^{TH} STD	Frequency	9	5	6
	Percentage	14.10%	7.80%	9.40%
5^{TH} - 8^{TH} STD	Frequency	17	12	16
	Percentage	26.60%	18.80%	25.00%
9^{TH} - 12^{TH} STD	Frequency	30	34	37
	Percentage	46.90%	53.10%	57.80%
UG	Frequency	5	8	3
	Percentage	7.80%	12.50%	4.70%
PG/PROFESSIONAL	Frequency	3	5	2
	Percentage	4.70%	7.80%	3.10%
Total		64	64	64

Pearson Chi-Square test P value- 0.565 NS(Not Significant)

Most of the patients across the three groups had completed secondary school. Any difference between the groups is statistically insignificant.

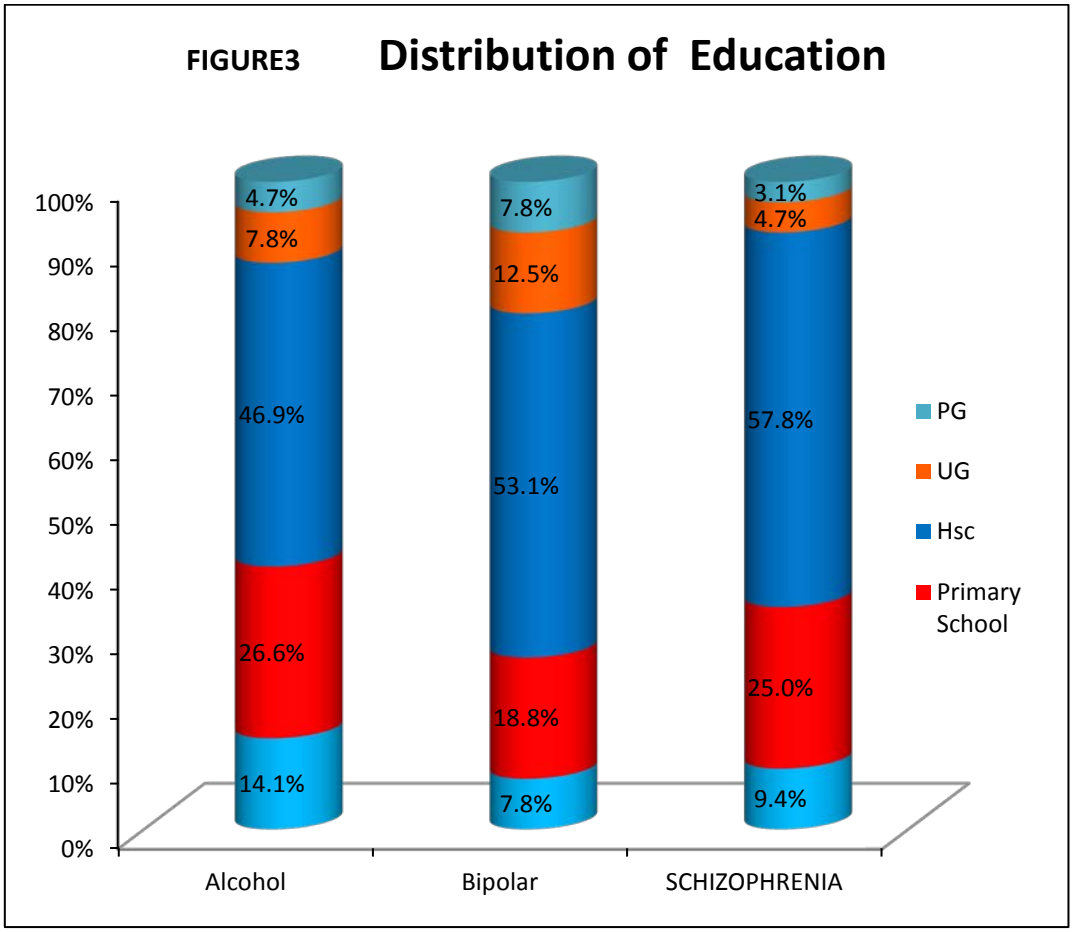


TABLE 5 COMPARISON OF DURATION OF MARRIAGE IN THE ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

MARRIAGE DURATION		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
10-13 YRS	Frequency	23	36	29
	Percentage	35.90%	56.20%	45.30%
14-17 YRS	Frequency	18	19	27
	Percentage	28.10%	29.70%	42.20%
18-21 YRS	Frequency	13	4	6
	Percentage	20.30%	6.20%	9.40%
>=21 YRS	Frequency	10	5	2
	Percentage	15.60%	7.80%	3.10%
TOTAL		64	64	64

Pearson Chi-Square test P value- 0.010 Significant

There were more patients with 10-13 years of marriage duration in the bipolar disorder group and this was statistically significant.

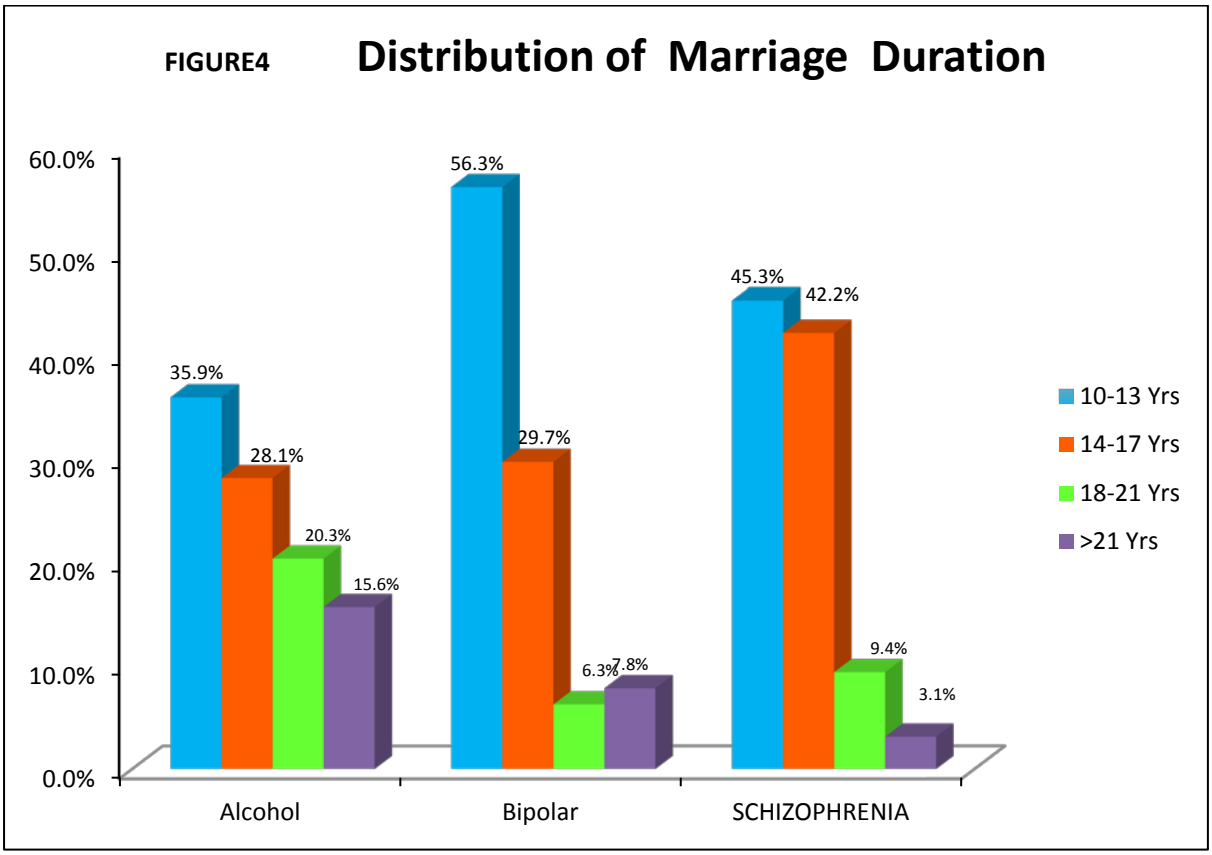


TABLE6 FAMILY TYPE IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

FAMILY TYPE		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
NUCLEAR	Frequency	21	23	24
	Percentage	32.80%	35.90%	37.50%
EXTENDED	Frequency	23	22	20
	Percentage	35.90%	34.40%	31.20%
JOINT	Frequency	20	19	20
	Percentage	31.20%	29.70%	31.20%
TOTAL		64	64	64

Pearson Chi-Square test P value- 0.978 NS(Not Significant)

All the three groups had almost equal proportions in the three family types. Any difference observed was insignificant.

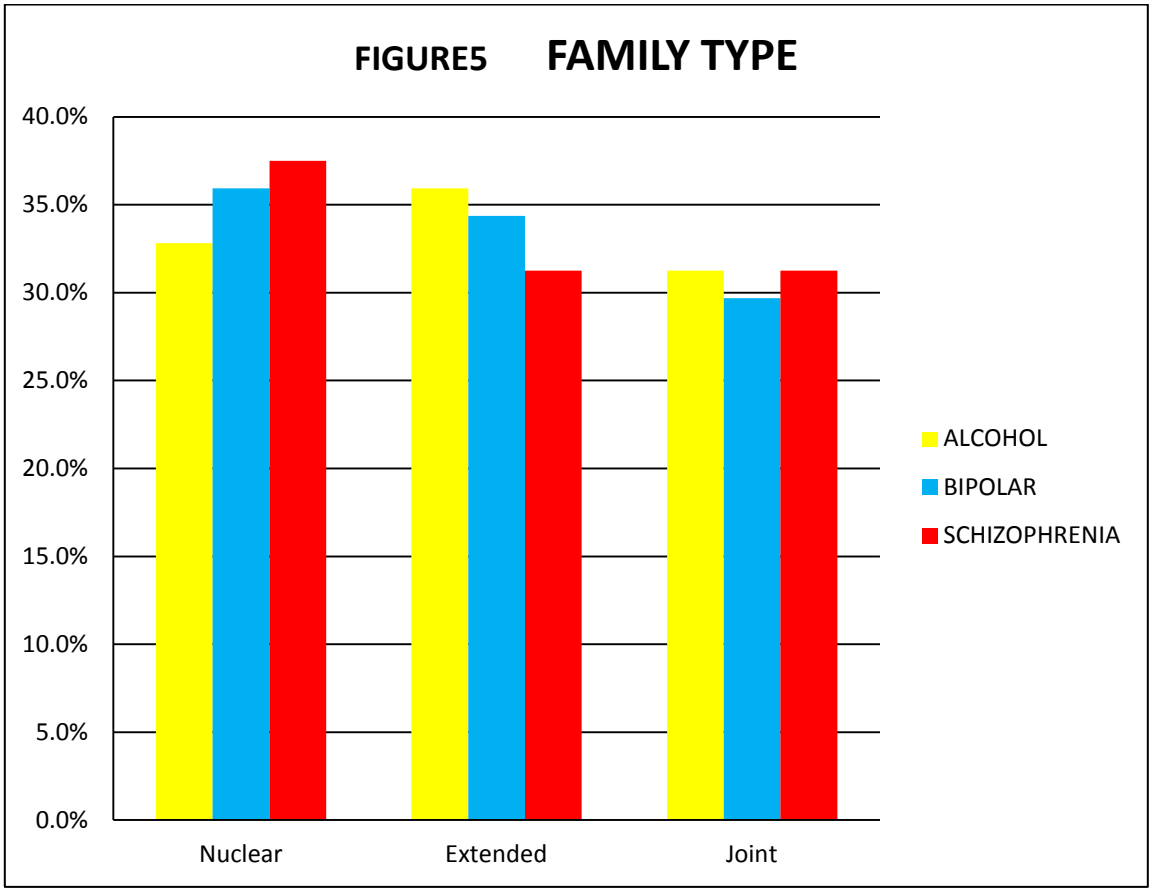


TABLE 7 NUMBER OF CHILDREN <15 YEARS AGE IN THE ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

CHILDREN <15YRS		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
≥ 3	Count	3	12	19
	% within Pt_diag	4.70%	18.80%	29.70%
2	Count	42	40	35
	% within Pt_diag	65.60%	62.50%	54.70%
1	Count	10	9	3
	% within Pt_diag	15.60%	14.10%	4.70%

Pearson Chi-Square test P value- 0.004 Significant

More patients in the schizophrenia group had more than 3 children in the children<15yrs age group. This difference was statistically significant at .004 level.

TABLE8 NUMBER OF CHILDREN >15 YEARS

CHILDREN >15YRS AGE		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
1	Count	16	10	7
	% within Pt_diag	25.00%	15.60%	10.90%
2	Count	9	4	5
	% within Pt_diag	14.10%	6.20%	7.80%
≥3	Count	2	1	2
	% within Pt_diag	3.10%	1.60%	3.10%

Pearson Chi-Square test P value- 0.182 NS(Not Significant)

Though alcohol dependent patients had more children of >15yrs age group, the difference was statistically insignificant.

TABLE9 LOCALITY OF THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

LOCALITY		ALCOHOL	BIPOLAR	SCHIZOPHRENIA
RURAL	Count	15	18	16
	% within Pt_diag	23.40%	28.10%	25.00%
SEMI URBAN	Count	17	17	19
	% within Pt_diag	26.60%	26.60%	29.70%
URBAN	Count	32	29	29
	% within Pt_diag	50.00%	45.30%	45.30%

Pearson Chi-Square test p value- 0.959 NS(Not Significant)

Most of the patients hailed from urban centres in all the three groups; any difference was not statistically significant.

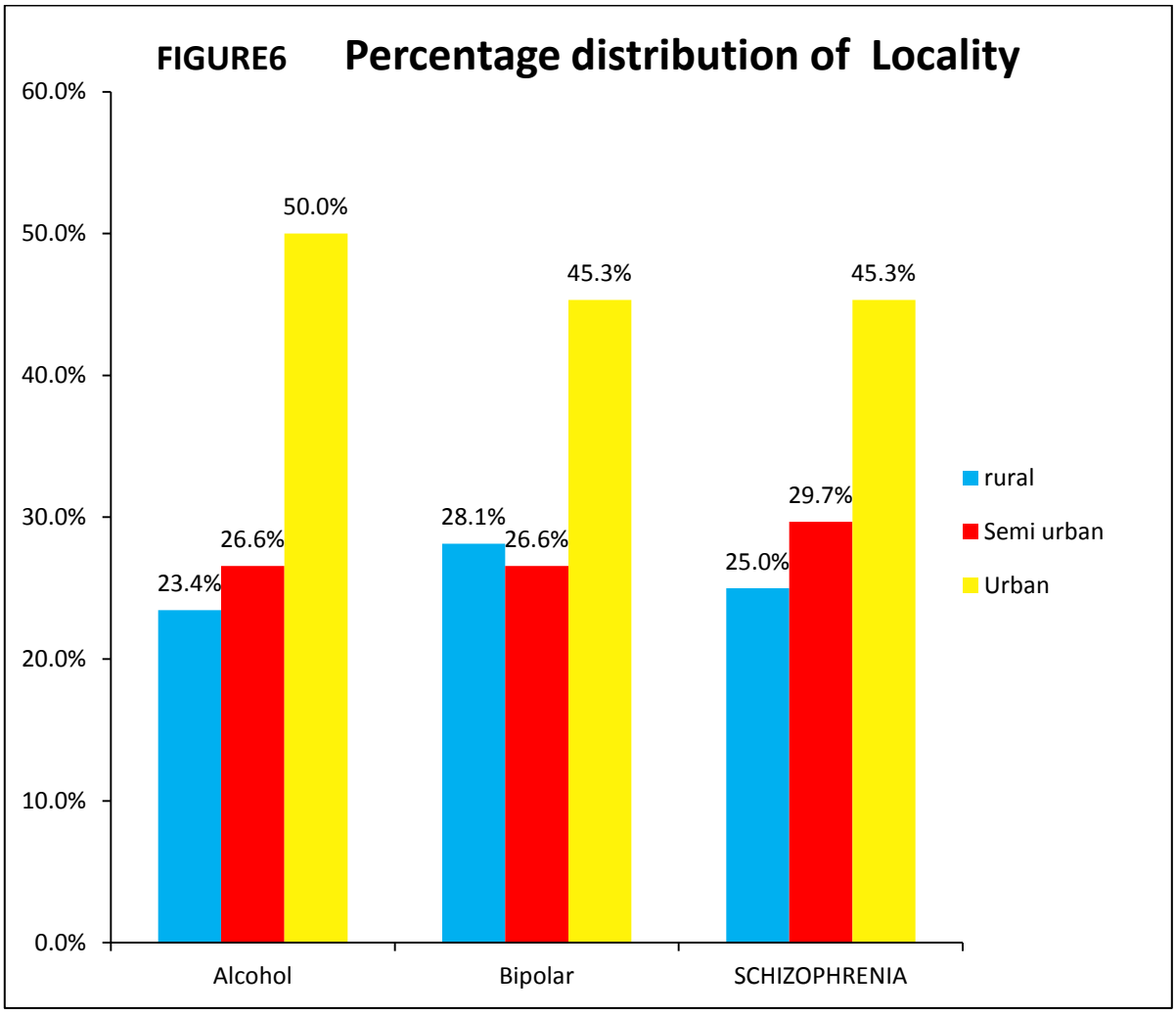


TABLE10 OCCUPATION OF THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

		ALCOHOL		BIPOLAR		SCHIZO-PHRENIA	
		Frequency	%	Frequency	%	Frequency	%
Occupation	Unemployed	41	64.1%	32	50.0%	49	76.6%
	Unskilled	10	15.6%	11	17.2%	7	10.9%
	Semi skilled	11	17.2%	13	20.3%	6	9.4%
	Skilled	2	3.1%	8	12.5%	2	3.1%
	Professional	0	0.0%	0	0.0%	0	0.0%

Pearson Chi-Square test p value- 0.052 NS (Not Significant)

Though less patients had any occupation in schizophrenia group, this difference was statistically not significant.

TABLE11 DURATION OF CURRENT UNEMPLOYMENT IN THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

CURRENT DURATION UNEMPLOYED		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
> 10 YRS	Count	9	7	11
	% within Pt_diag	14.10%	10.90%	17.20%
6-10 YRS	Count	18	12	27
	% within Pt_diag	28.10%	18.80%	42.20%
1-5 YRS	Count	27	39	24
	% within Pt_diag	42.20%	60.90%	37.50%
< 1 YRS	Count	10	6	2
	% within Pt_diag	15.60%	9.40%	3.10%

Pearson Chi-Square test p value- 0.012 Significant

More patients in the schizophrenia group were chronically unemployed; this difference was statistically significant.

TABLE12 COMPARISON OF NET UNEMPLOYMENT DURATION BETWEEN THE PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

NET UNEMPLOYED DURATION IN 10 YRS		ALCOHOL	BIPOLAR	SCHIZO - PHRENIA
> 10 YRS	Count	24	22	23
	% within Pt_diag	37.50%	34.40%	35.90%
5-10 YRS	Count	20	19	25
	% within Pt_diag	31.25%	29/90%	39.06%
1-5 YRS	Count	17	18	15
	% within Pt_diag	26.60%	28.10%	23.40%
< 1 YR	Count	3	5	1
	% within Pt_diag	4.70%	7.80%	1.60%

Pearson Chi-Square test p value- 0.270 Not Significant

All the three groups had almost equal proportions in different duration categories; any difference was statistically insignificant.

TABLE 13 ANNUAL FAMILY INCOME IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

Annual Income of family Rs		Alcohol	Bipolar	Schizo-phrenia
<60,000	Count	12	12	10
	% within group	18.80%	18.80%	15.60%
60,000-1,20,000	Count	13	11	18
	% within group	20.30%	17.20%	28.10%
1,20,000-1,80,000	Count	22	26	24
	% within group	34.40%	40.60%	37.50%
Above 1,80,000	Count	17	15	12
	% within group	26.60%	23.40%	18.80%
Pearson Chi-Square		χ^2 3.289[a]	df=6	0.772 NS

Though more patients in bipolar and schizophrenia groups had higher income, the difference was insignificant statistically.

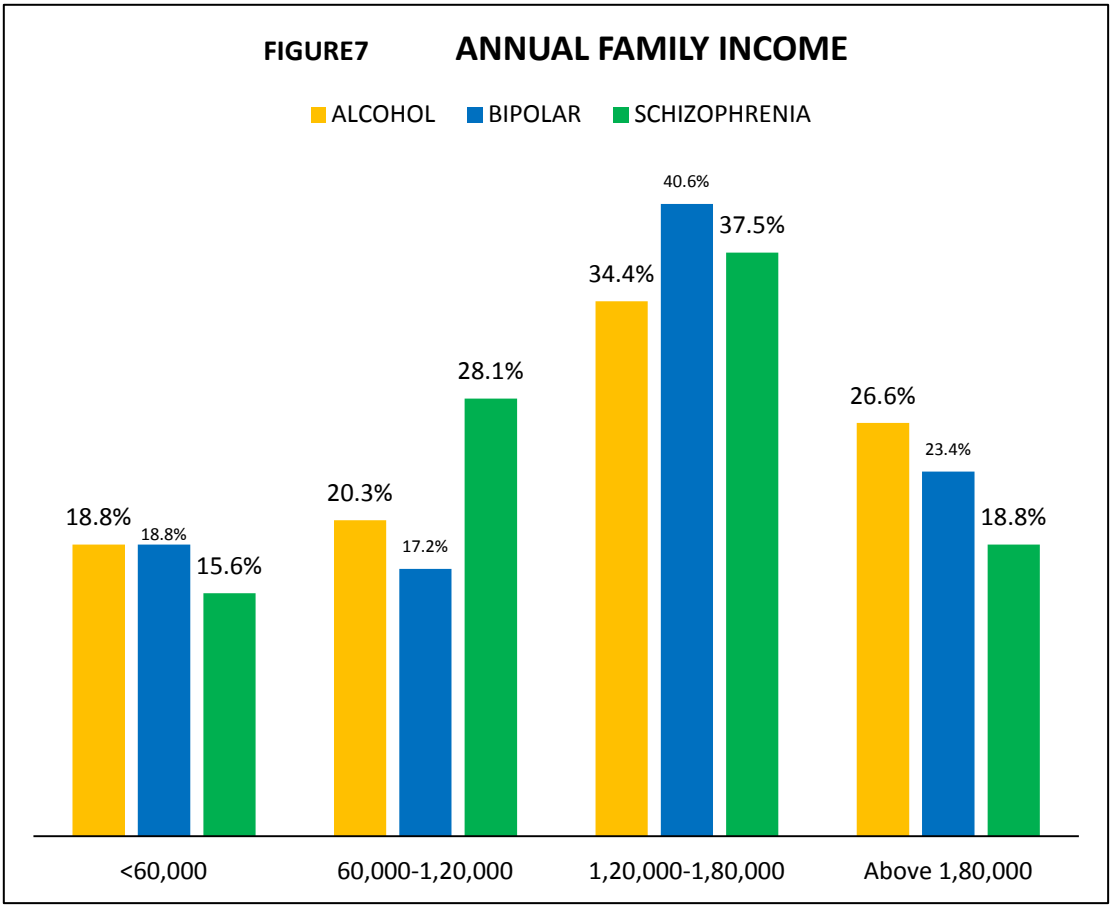


TABLE14 NET CONTRIBUTION TO FAMILY INCOME BY PATIENTS IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS IN PAST 1YEAR:

Pt net contribution to family income 1yr		Alcohol	Bipolar	Schizophrenia
<10 %	Count	41	47	53
	% within group	64.10%	73.40%	82.80%
11-25%	Count	15	7	2
	% within group	23.40%	10.90%	3.10%
26-50%	Count	5	2	1
	% within group	7.80%	3.10%	1.60%
51-75%	Count	1	2	2
	% within group	1.60%	3.10%	3.10%
Above 75%	Count	2	6	6
	% within group	3.10%	9.40%	9.40%
Total	Count	64	64	64

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.218[a]	8	0.049 SIG

More patients in the schizophrenia group had poor contribution to the family income, a statistically significant difference.

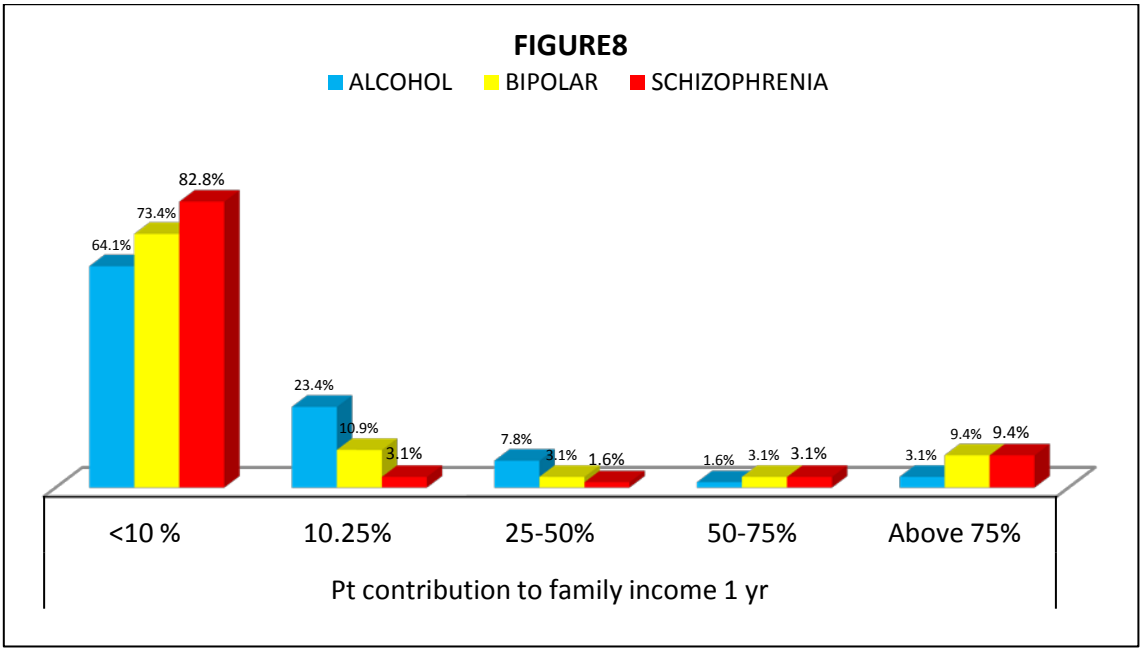


TABLE15 SPOUSE EDUCATION IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

Education_spouse		Alcohol	Bipolar	Schizophrenia
Illiterate/<5th std	Count	4	1	4
	% within group	6.20%	1.60%	6.20%
5th-8th std	Count	31	29	33
	% within group	48.40%	45.30%	51.60%
9th to 12th std	Count	15	21	18
	% within group	23.40%	32.80%	28.10%
UG	Count	14	12	9
	% within group	21.90%	18.80%	14.10%
Professional/PG	Count	0	1	0
	% within group	0.00%	1.60%	0.00%
Total	Count	64	64	64
Pearson Chi-Square		6.344[a]	df 8	.609 Not Sig

Less spouses from the schizophrenia group went to college, but it was a statistically insignificant difference.

FIGURE9

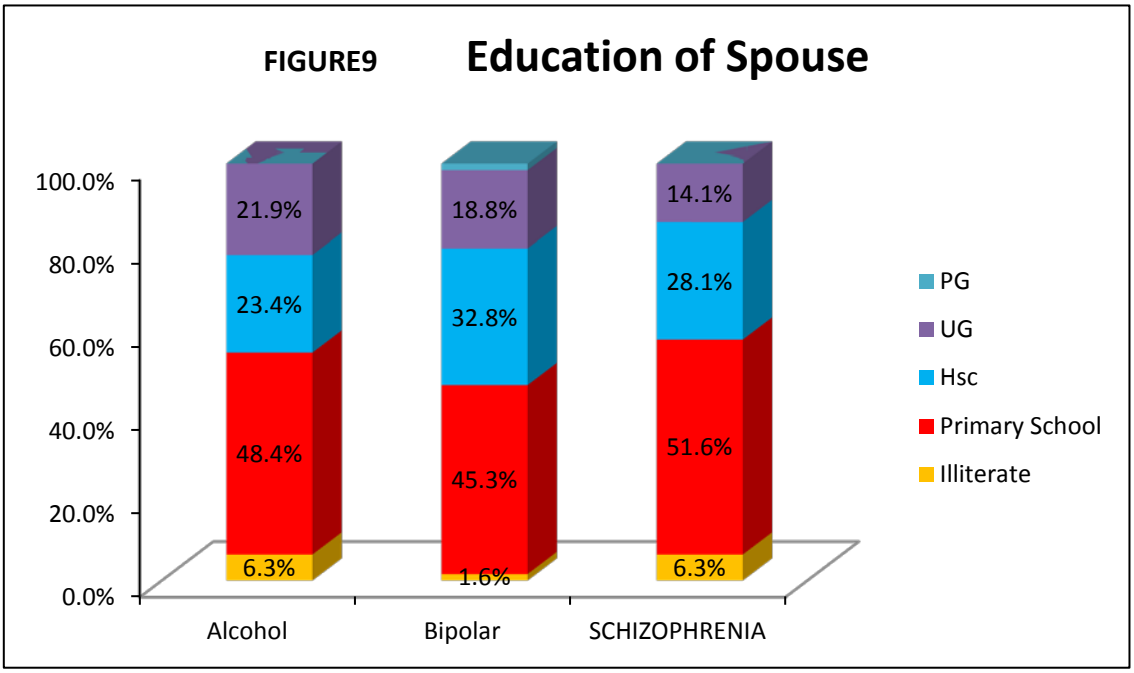


TABLE 16 AGE OF SPOUSES IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

Age_of_spouse		Alcohol	Bipolar	Schizophrenia
<=35 Yrs	Count	36	42	41
	% within group	56.20%	65.60%	64.10%
36-40 Yrs	Count	25	14	20
	% within group	39.10%	21.90%	31.20%
41-45 yrs	Count	3	5	1
	% within group	4.70%	7.80%	1.60%
46-50Yrs	Count	0	2	1
	% within group	0.00%	3.10%	1.60%
>50 Yrs	Count	0	1	1
	% within group	0.00%	1.60%	1.60%
Total	Count	64	64	64

Pearson Chi-Square =9.272a df =8 .320 Non Significant

Though there were less number of spouses of >45years in alcohol group, the difference was statistically insignificant, and the three groups were having comparable spouses.

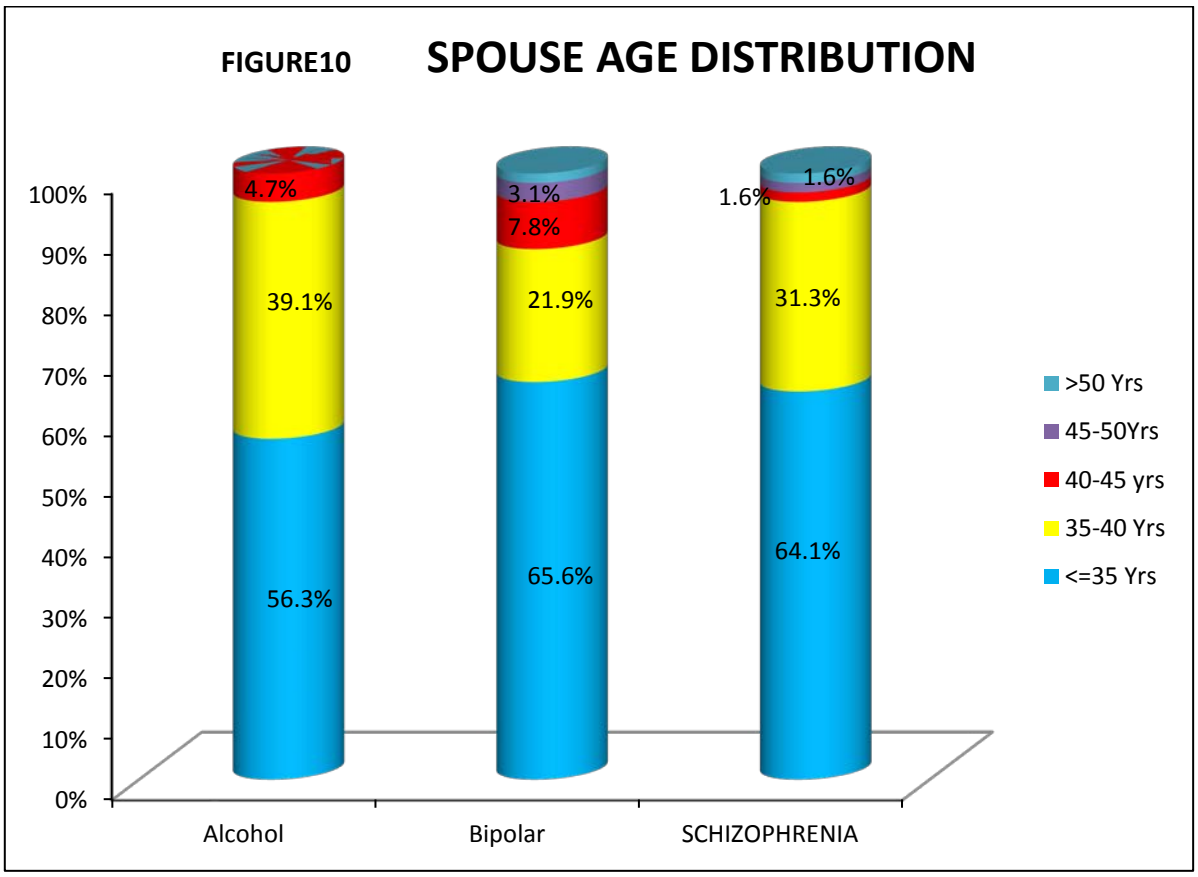


TABLE17 OCCUPATION IN SPOUSES IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

Spouse_occupation		Alcohol	Bipolar	Schizophrenia
Unemployed	Count	11	6	8
	% within group	17.20%	9.40%	12.50%
Unskilled	Count	22	8	12
	% within group	34.40%	12.50%	18.80%
Semi skilled	Count	15	37	33
	% within group	23.40%	57.80%	51.60%
Skilled	Count	16	8	9
	% within group	25.00%	12.50%	14.10%
Professional	Count	0	5	2
	% within group	0.00%	7.80%	3.10%
Total	Count	64	64	64
Pearson Chi-Square		27.526[a]	df 8	0.036 SIG

There were more unemployed and unskilled-job-occupied spouses in the alcohol group with a statistical significance.

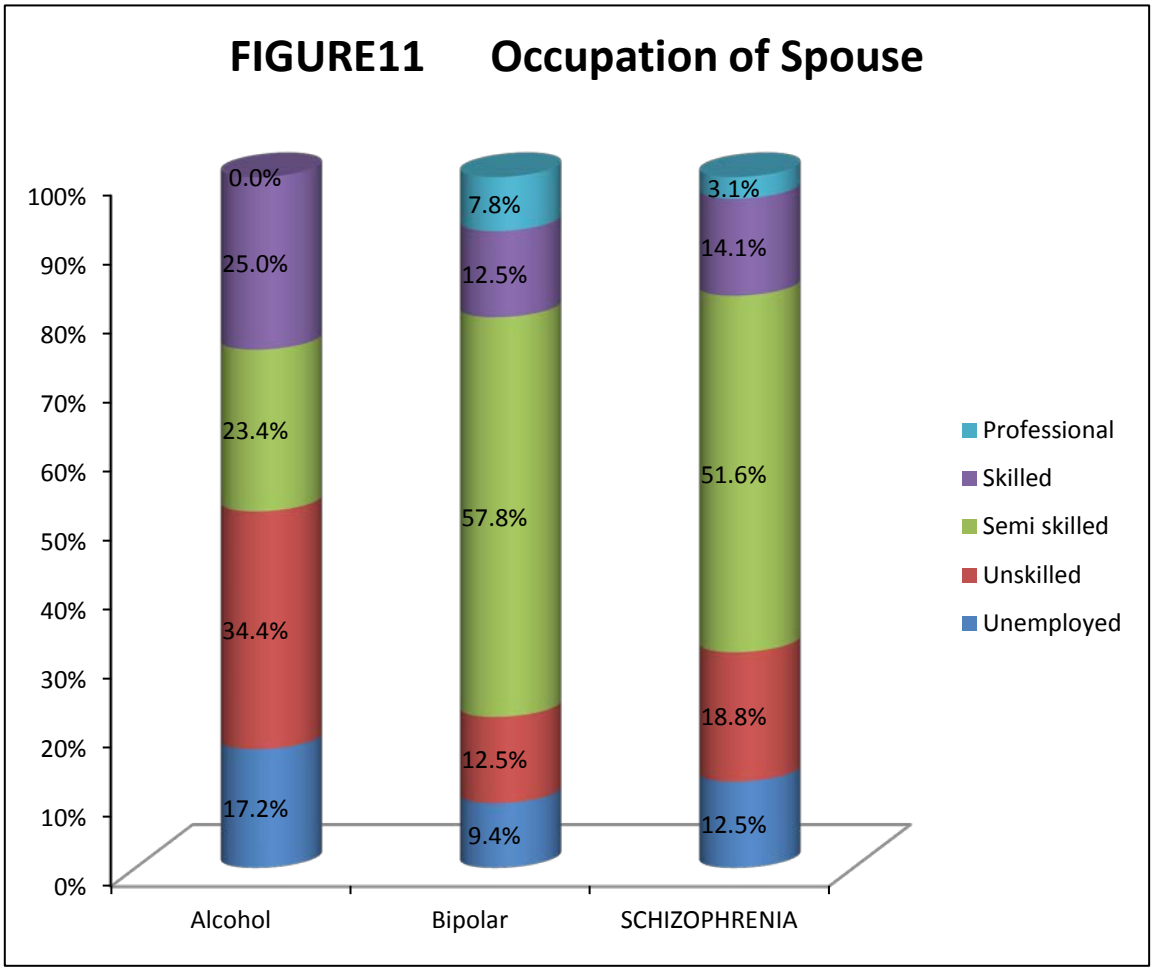


TABLE18 NET CONTRIBUTION TO FAMILY INCOME IN SPOUSES IN PAST YR IN ALCOHOL DEPENDENCE, BIPOLAR DISORDER, AND SCHIZOPHRENIA GROUPS:

Spouse contribution1_yr		Alcohol	Bipolar	Schizophrenia
<10 %	Count	2	8	8
	% within group	3.10%	12.50%	12.50%
11-25%	Count	6	0	0
	% within group	9.40%	0.00%	0.00%
26-50%	Count	17	9	14
	% within group	26.60%	14.10%	21.90%
51-75%	Count	11	16	12
	% within group	17.20%	25.00%	18.80%
Above 75%	Count	28	31	30
	% within group	43.80%	48.40%	46.90%
Total	Count	64	64	64

Pearson Chi-Square=19.684[a] df= 8; 0.045 SIG

More spouses contributed for about more than 50% of family income in the bipolar group, a statistically significant difference.

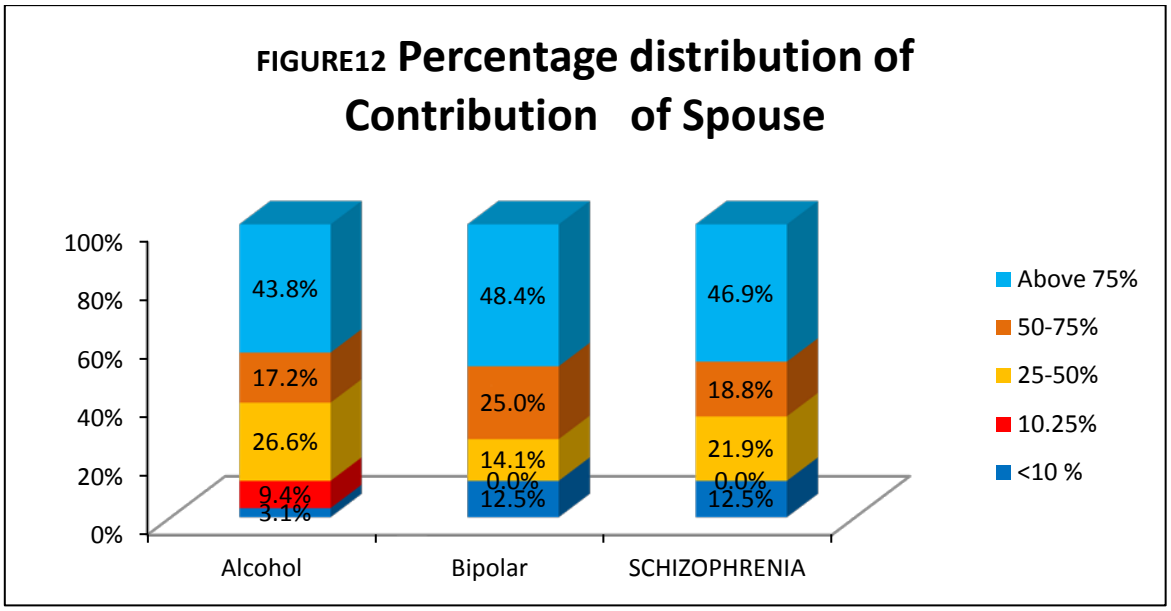


TABLE19 NET CONTRIBUTION TO FAMILYINCOME BY SPOUSE IN PAST 5YR

Spouse contribution income _5yr		Alcohol	Bipolar	Schizo-phrenia
<10 %	Count	2	3	1
	% within group	3.10%	4.70%	1.60%
11-25%	Count	7	0	0
	% within group	10.90%	0.00%	0.00%
26-50%	Count	25	5	1
	% within group	39.10%	7.80%	1.60%
51-75%	Count	17	30	30
	% within group	26.60%	46.90%	46.90%
Above 75%	Count	13	26	32
	% within group	20.30%	40.60%	50.00%
Total	Count	64	64	64
Pearson Chi-Square	59.361[a]	df 8	0.005 SIG	

Only 30% spouses contributed more than 50% of family income in the alcohol group, this was a statistically significant difference.

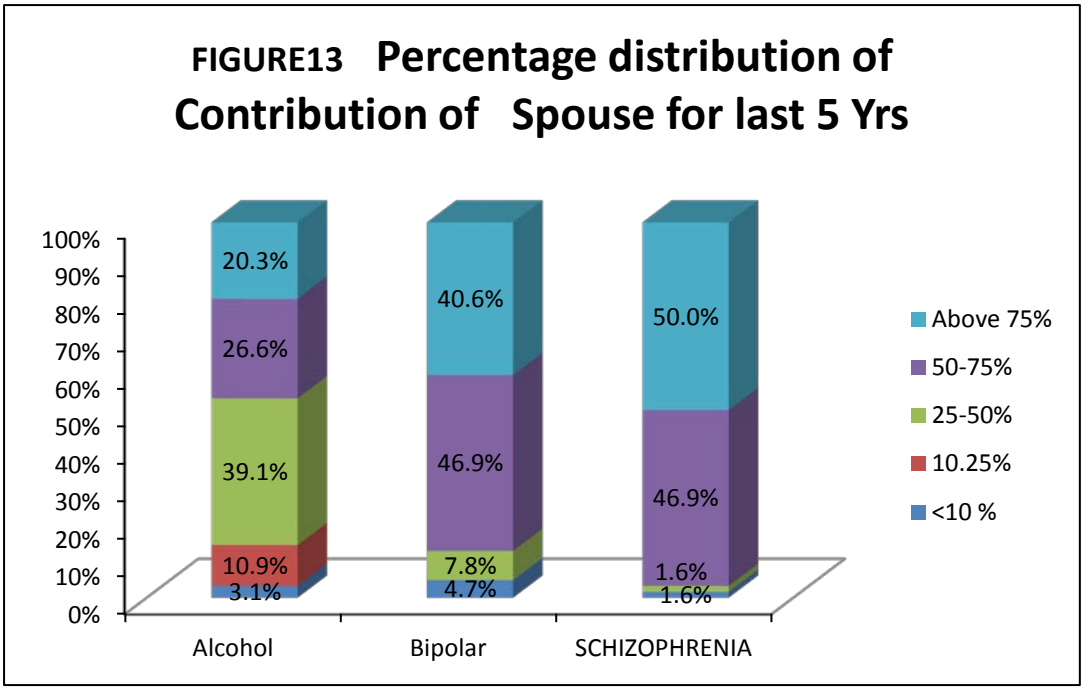


TABLE20 DURATION OF CAREGIVING

		Alcohol		Bipolar		Schizophrenia	
Duration of caregiving	10-13 Yrs	37	57.80%	41	64.10%	37	57.80%
	14-17 yrs	9	14.10%	17	26.60%	14	21.90%
	18-21 yrs	12	18.80%	4	6.20%	9	14.10%
	>21 yrs	6	9.40%	2	3.10%	4	6.20%

Duration of caregiving Chi-square 8.648 df 6 Non Sig..194

Though spouses in the alcohol group with >18years of caregiving are more than other groups, the difference was statistically insignificant.

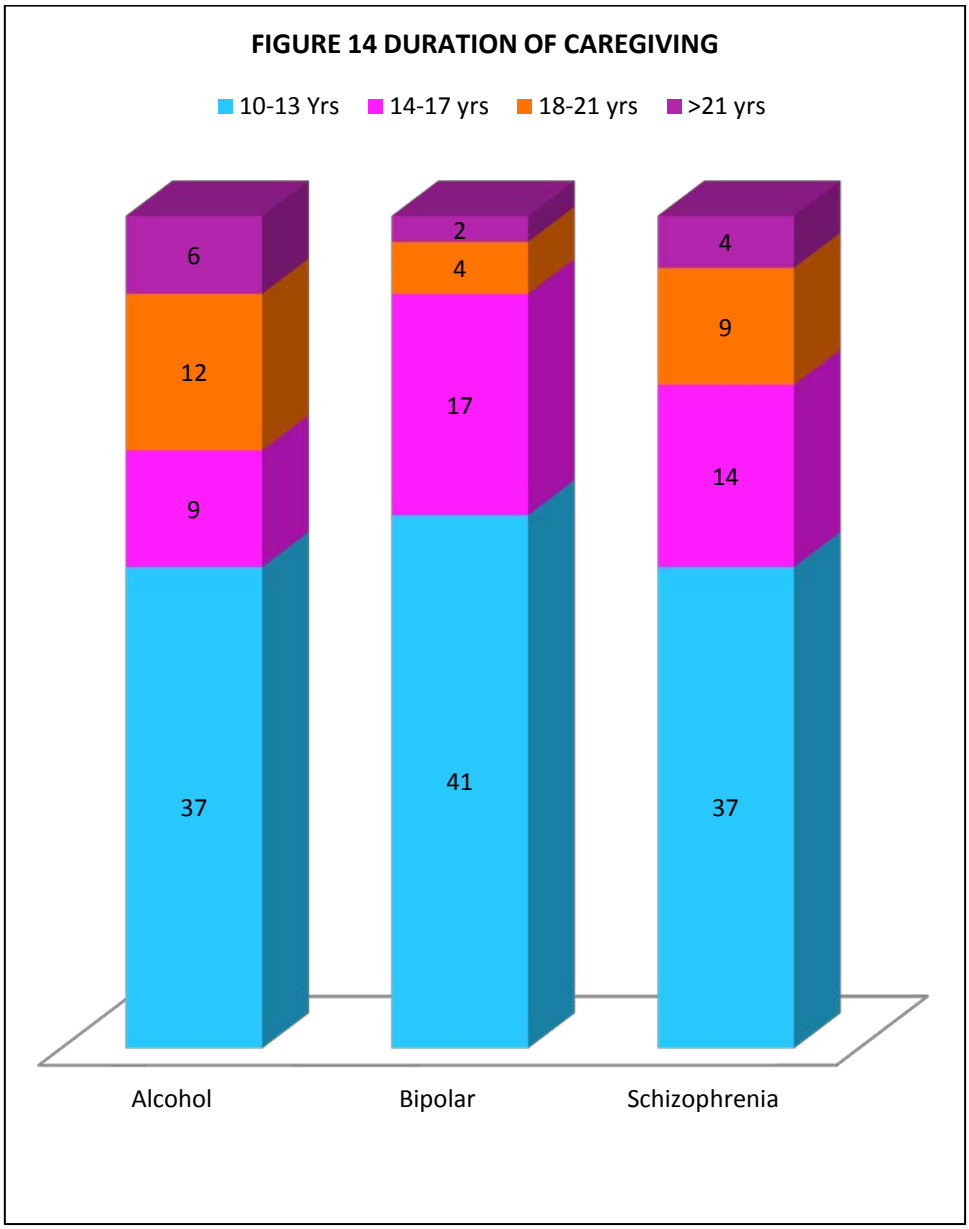


TABLE21 DURATION OF ILLNESS

		Group					
		Alcohol		Bipolar		Schizophrenia	
Duration of illness	10-13 Yrs	26	40.60%	11	17.20%	22	34.40%
	14-17 yrs	17	26.60%	33	51.60%	22	34.40%
	18-21 yrs	13	20.30%	13	20.30%	11	17.20%
	>21 yrs	8	12.50%	7	10.90%	9	14.10%

Pearson Chi-Square Tests Chi-square12.185 df=6 ;Not Sig.058

Most patients in the alcohol group were having 10-13 years duration of illness, this difference was insignificant statistically.

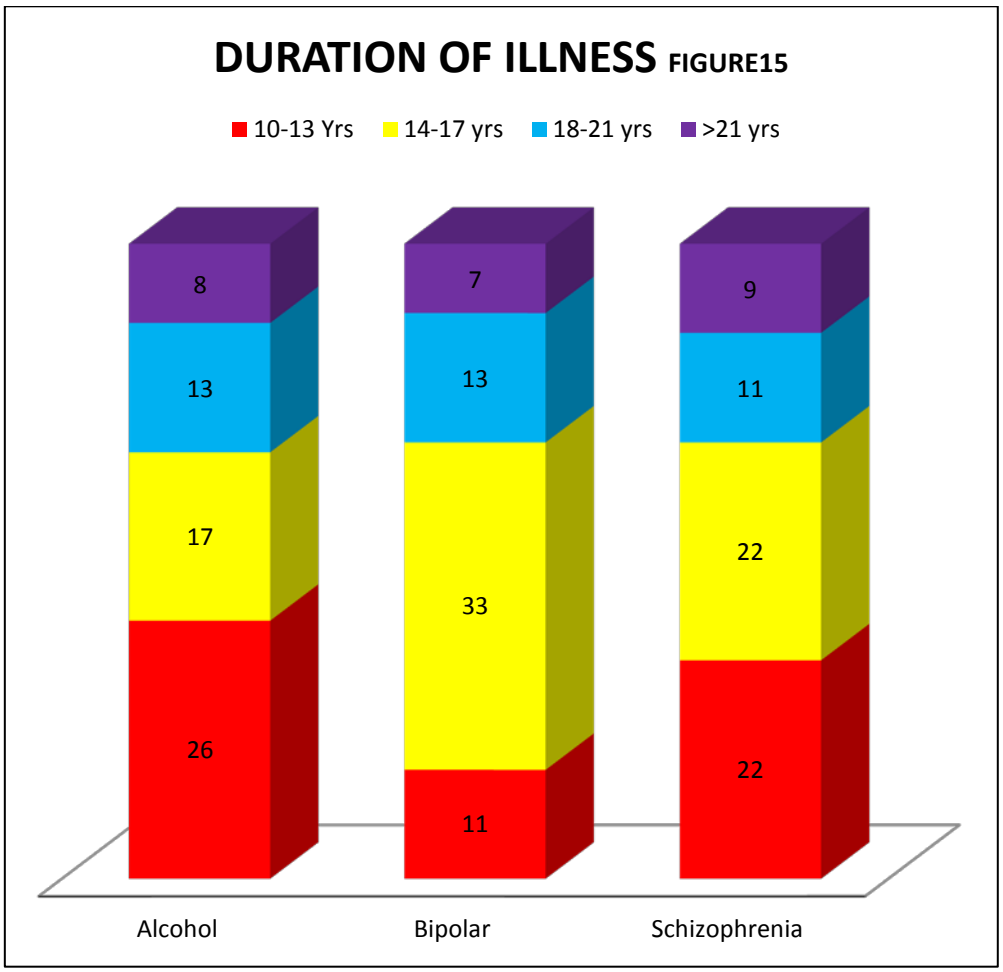


TABLE22 CURRENT DURATION OF COMPLICATION/EPISODE

Current complication /episode duration		Alcohol	Bipolar
>8Weeks	Count	3	2
	% within group	4.70%	3.10%
4-8 Wks	Count	8	4
	% within group	12.50%	6.20%
2-4Wks	Count	15	11
	% within group	23.40%	17.20%
1-2 wks	Count	17	20
	% within group	26.60%	31.20%
<1 wks	Count	21	27
	% within group	32.80%	42.20%
Total	Count	64	64
Pearson Chi-Square	3.142a	df 4	.534 Not Sig.

Though more patients with alcohol dependence had related complications for longer duration, it was not a statistically significant difference.

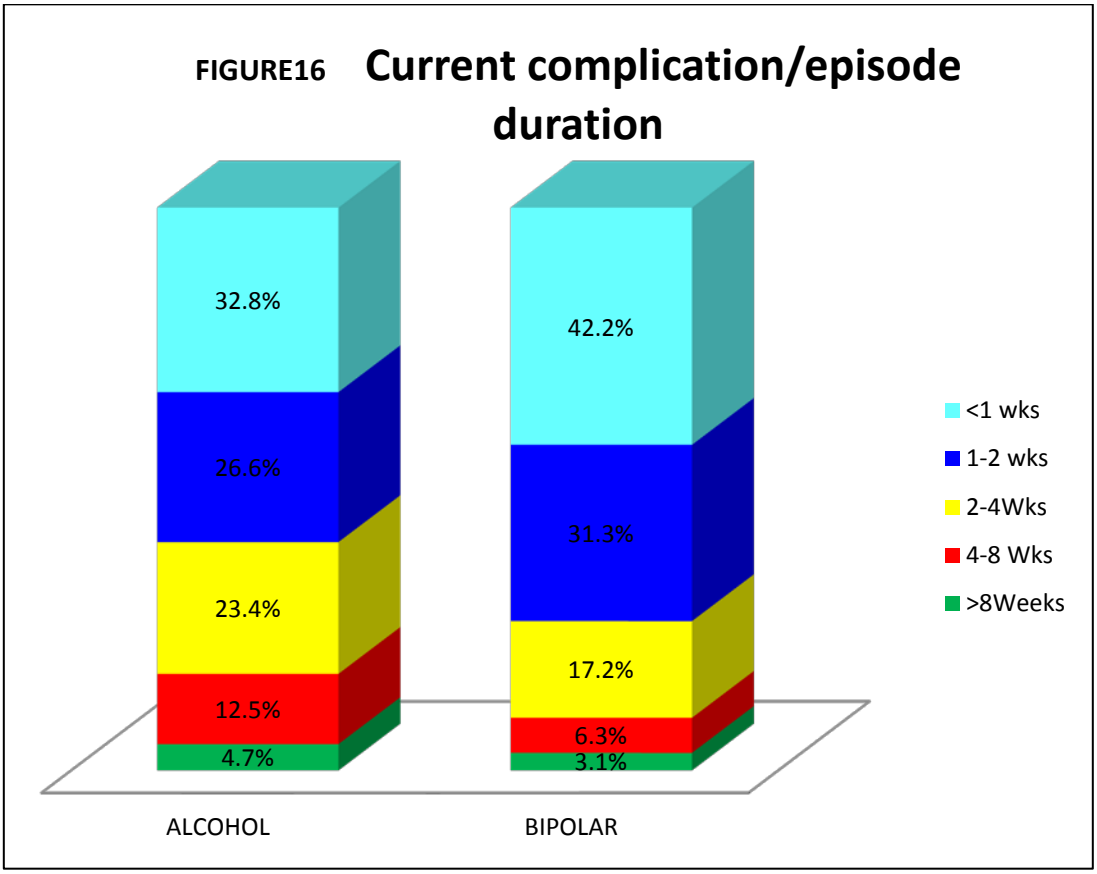


TABLE23 TOTAL ABSTENTION/SYMPTOMFREE PERIOD PAST 5YRS

Total Abstinence/ symptom free period net in past 5 yrs		Alcohol	Bipolar
<1 Yr	Count	48	21
	% within group	75.00%	32.80%
1-2 Yrs	Count	13	14
	% within group	20.30%	21.90%
2-3 Yrs	Count	3	16
	% within group	4.70%	25.00%
3-4 Yrs	Count	0	8
	% within group	0.00%	12.50%
>4 Yrs	Count	0	5
	% within group	0.00%	7.80%
Total	Count	64	64
Pearson Chi-Square	32.497	df 4	*0.004

More alcohol dependents had less than 1year of abstinence amidst dependence. This difference was statistically significant.

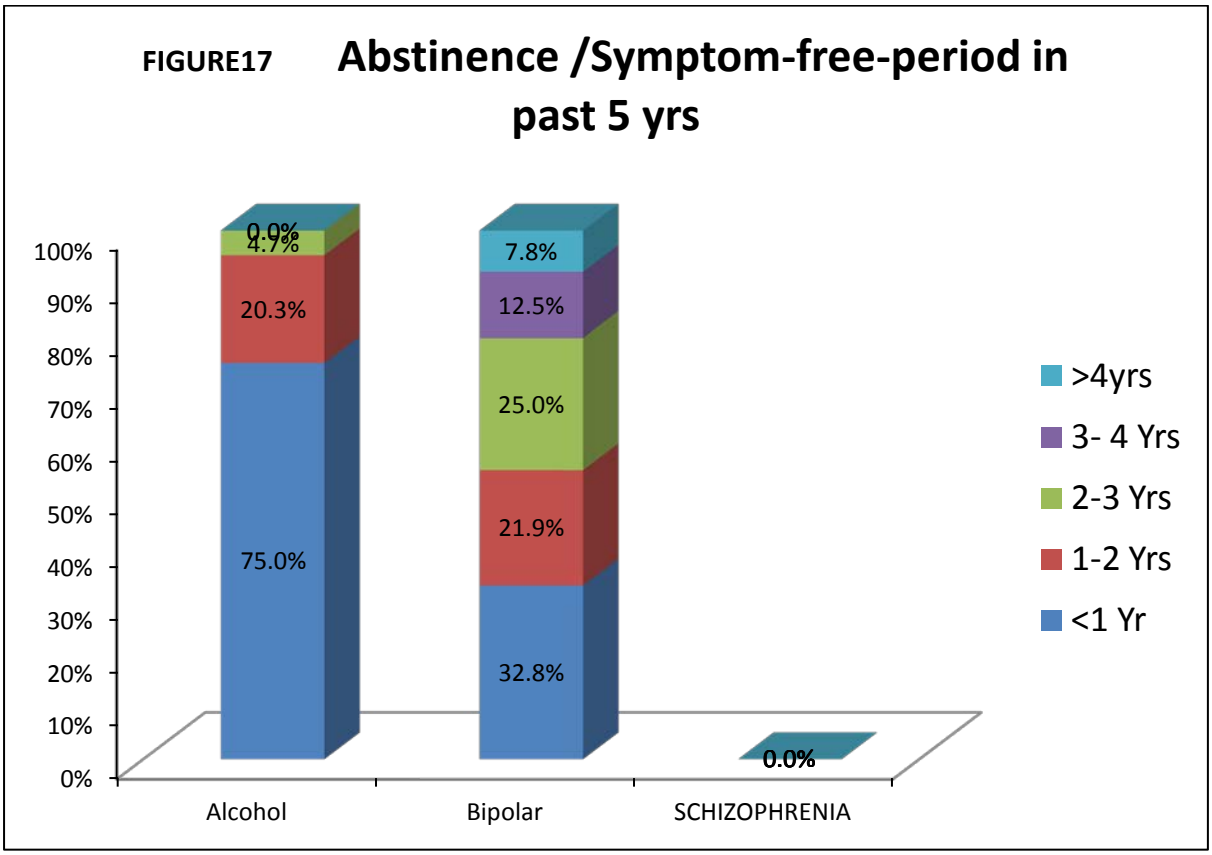


TABLE24 DISTRIBUTION OF ALCOHOL RELATED COMPLICATIONS

Psychiatric_complications	Alcohol Count(Percentage)
Psychosis	9(14.10%)
Delirium	8(12.50%)
Mood Features	3(4.70%)
Seizures	8(12.50%)
Amnesic syndromes	3(4.70%)
Withdrawal syndrome only	33(51.60%)
Total	64(100%)

Over 30% of patients currently reported with complications like delirium, seizures and amnesic syndromes. Around 18% had induced psychotic disorders.

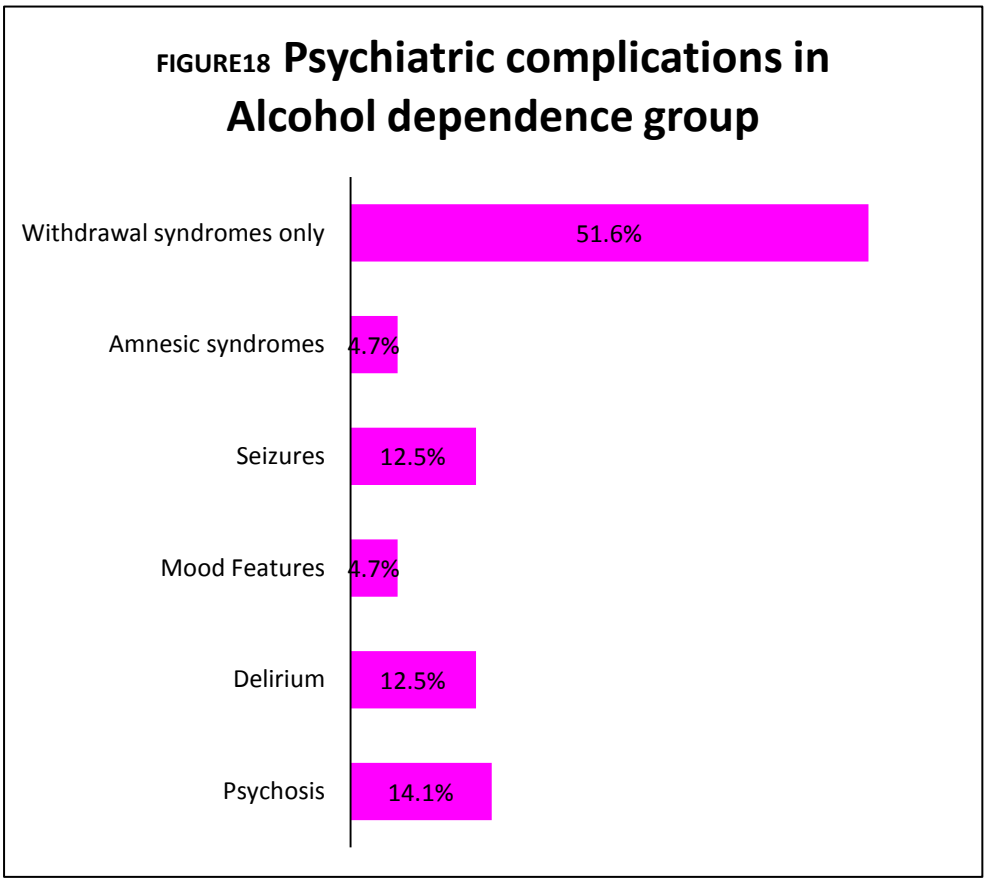


TABLE25 FREQUENCY OF BIPOLAR EPISODES

EPISODES		Bipolar
MANIA	Count	27
	% within group	42.20%
MIXED	Count	11
	% within group	17.20%
DEPRESSION	Count	26
	% within group	40.60%
Total	Count	64

Majority of episodes in the bipolar patients were either manic or depressive episodes.

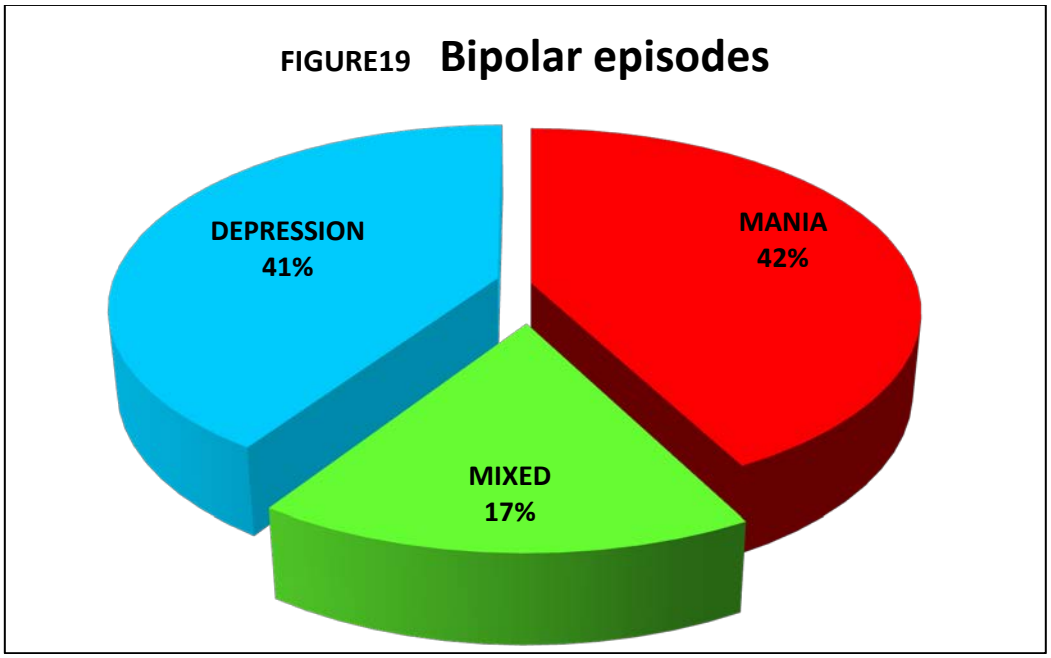


TABLE26 FREQUENCY OF MEDICAL/PSYCHIATRIC ADMISSIONS

Frequency_of_medical/psychiatric admissionsin10yrs		Alcohol	Bipolar	Schizophrenia
>6	Count	5	8	13
	% within group	7.80%	12.50%	20.30%
5 to 6	Count	19	21	17
	% within group	29.70%	32.80%	26.60%
3 to 4	Count	25	22	23
	% within group	39.10%	34.40%	35.90%
1 to 2	Count	9	9	7
	% within group	14.10%	14.10%	10.90%
0	Count	6	4	4
	% within group	9.40%	6.20%	6.20%
Total	Count	64	64	64
Pearson Chi-Square 5.282[a]	df 8	Not Sign 0.727		

The frequency of hospital admissions in past 10 years was almost even over the three groups, and no statistically significant difference was found.

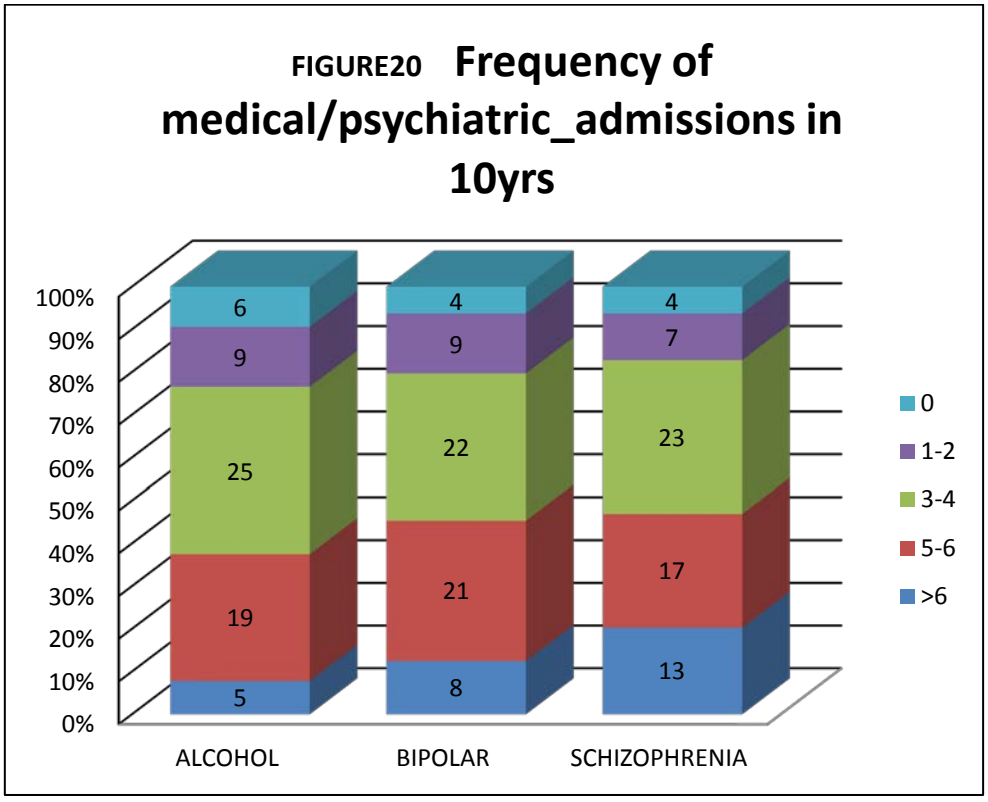


TABLE27 FREQUENCY OF ICU ADMISSIONS IN PAST 10YRS

Frequency_of_ICU_admissions in_10_yrs		Alcohol	Bipolar	Schizophrenia
>6	Count	2	0	6
	% within group	3.10%	0%	9.40%
5 to 6	Count	13	11	24
	% within group	20.30%	17.20%	37.50%
3 to 4	Count	30	37	13
	% within group	46.90%	57.80%	20.30%
1 to 2	Count	11	9	11
	% within group	17.20%	14.10%	17.20%
0	Count	8	7	10
	% within group	12.50%	10.90%	15.60%
Total	Count	64	64	64
Pearson Chi-Square	23.846[a]	Df 8		SIG 0.045

Frequency of ICU admissions were more in the patients with schizophrenia. It was found to be a statistically significant difference.

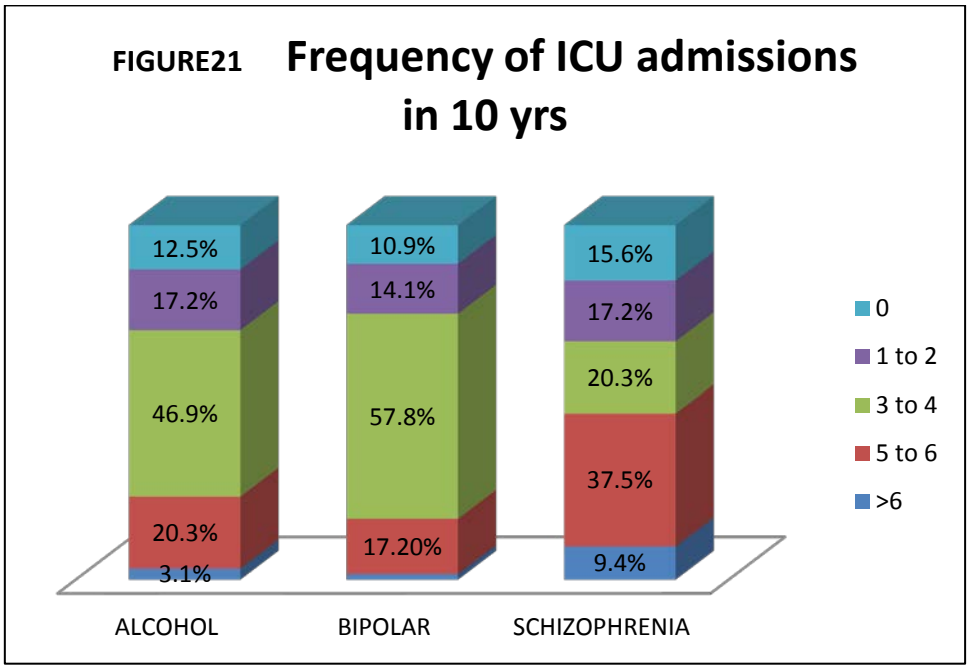


TABLE28 FREQUENCY OF EPISODES IN BIPOLAR PATIENTS IN PAST 10YRS

Number_of_episodes		Bipolar
0 to 2	Count	0
	% within group	0.00%
3 to 5	Count	4
	% within group	6.25%
6 to 8	Count	10
	% within group	15.63%
9 to 11	Count	25
	% within group	39.06%
>11	Count	25
	% within group	39.06%
Total	Count	64

Pearson Chi-Square	192*	Df 8	SIG *0.005

More than 75% of patients had almost atleast an episode per year on an average.

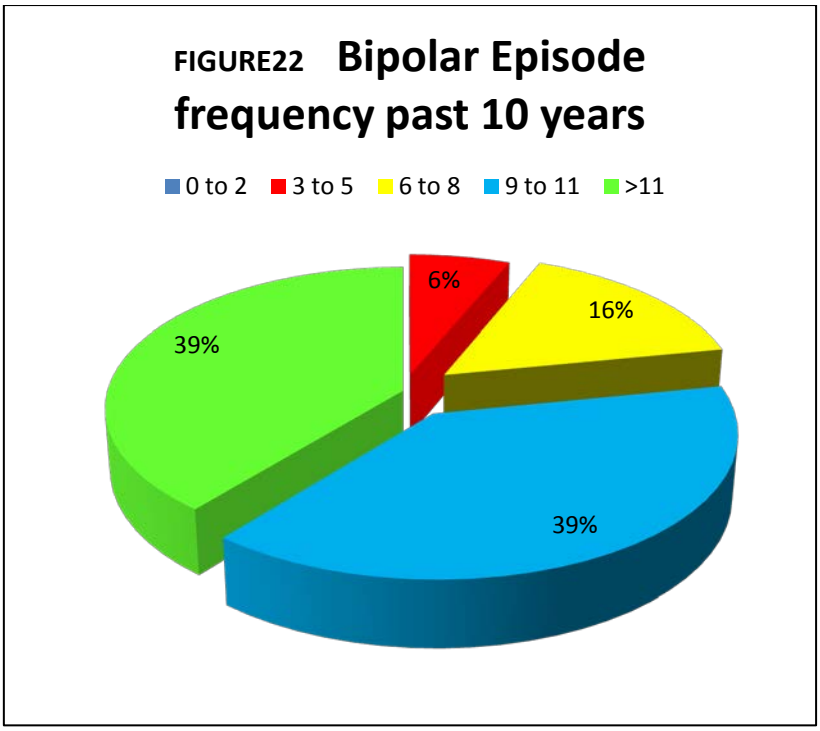


TABLE29 SIGNIFICANT STRESSFUL LIFE EVENTS IN SPOUSES OF THREE GROUPS:

		N	Mean	Std. Deviation	95% Confidence Interval for Mean		P VALUE
PSLES 1YEAR	ALCOHOL	64	199.00	77.176	179.72	218.28	0.058 NOT SIGNIFICANT
	BIPOLAR	64	181.75	74.700	163.09	200.41	
	SCHIZOPHRENIA	64	212.36	64.368	196.28	228.44	

All the three groups had comparable stressful life events score, as the difference among them was not statistically significant.

TABLE30 DISTRIBUTION OF DURATION OF ILLNESS AND CAREGIVING:

		Group					
		Alcohol		Bipolar		Schizophrenia	
		Count	N %	Count	N %	Count	N %
Duration of illness	10-13 Yrs	26	40.6%	11	17.2%	22	34.4%
	14-17 yrs	17	26.6%	33	51.6%	22	34.4%
	18-21 yrs	13	20.3%	13	20.3%	11	17.2%
	>21 yrs	8	12.5%	7	10.9%	9	14.1%
Duration of caregiving	10-13 Yrs	37	57.8%	41	64.1%	37	57.8%
	14-17 yrs	9	14.1%	17	26.6%	14	21.9%
	18-21 yrs	12	18.8%	4	6.2%	9	14.1%
	>21 yrs	6	9.4%	2	3.1%	4	6.2%

Pearson Chi-Square Tests

Duration of illness Chi-square 12.185 df =6 NOTSig..58

Duration of caregiving Chi-square 8.648 df =6 NOTSig.194

Both the duration of illness and caregiving were comparable and any difference observed was not statistically significant

TABLE31 COMPARISON OF BURDEN BETWEEN THREE GROUPS:

		N	Mean	Std. Deviation	Std. Error	95% C.I. Lower Bound	95% C.I. Upper Bound
BAS spouse related	Alcohol	64	8.6875	2.74223	0.34278	8.0025	9.3725
	Bipolar	64	13.3594	2.1921	0.27401	12.8118	13.9069
	Schizophrenia	64	11.4688	2.82825	0.35353	10.7623	12.1752
BAS health	Alcohol	64	12.3281	3.66907	0.45863	11.4116	13.2446
	Bipolar	64	16.2344	2.27995	0.28499	15.6649	16.8039
	Schizophrenia	64	16.5625	1.63178	0.20397	16.1549	16.9701
BAS support	Alcohol	64	8.0781	2.73313	0.34164	7.3954	8.7608
	Bipolar	64	9.7656	2.70063	0.33758	9.091	10.4402
	Schizophrenia	64	10.0938	2.9044	0.36305	9.3683	10.8192
BAS routine	Alcohol	64	12.5313	2.42977	0.30372	11.9243	13.1382
	Bipolar	64	13.3438	2.21265	0.27658	12.791	13.8965
	Schizophrenia	64	13.4219	1.47793	0.18474	13.0527	13.7911
BAS pt support	Alcohol	64	9.4844	2.32988	0.29123	8.9024	10.0664
	Bipolar	64	8.9844	2.14174	0.26772	8.4494	9.5194
	Schizophrenia	64	8.3906	2.12033	0.26504	7.861	8.9203
BAS responsibility	Alcohol	64	6.7813	2.18559	0.2732	6.2353	7.3272
	Bipolar	64	8.75	2.62467	0.32808	8.0944	9.4056
	Schizophrenia	64	10.9063	1.36532	0.17066	10.5652	11.2473
BAS other relations	Alcohol	64	7.1563	1.89585	0.23698	6.6827	7.6298
	Bipolar	64	7.5156	1.34509	0.16814	7.1796	7.8516
	Schizophrenia	64	8.2656	1.05773	0.13222	8.0014	8.5298
BAS pt behaviour	Alcohol	64	8.8438	2.33142	0.29143	8.2614	9.4261
	Bipolar	64	9	2.21825	0.27728	8.4459	9.5541
	Schizophrenia	64	10.4219	1.60163	0.2002	10.0218	10.822
BAS strategy CG	Alcohol	64	7.6563	2.63805	0.32976	6.9973	8.3152
	Bipolar	64	8.2031	2.19798	0.27475	7.6541	8.7522
	Schizophrenia	64	8.6094	2.35444	0.29431	8.0213	9.1975
BAS total	Alcohol	64	81.5469	16.88235	2.11029	77.3298	85.764
	Bipolar	64	94.1719	15.66616	1.95827	90.8367	98.6633
	Schizophrenia	64	98.2031	14.97212	1.87152	94.4632	101.943

Higher burden levels were noted with spouse-related dimension in bipolar group, with taking responsibility and other relations dimensions in schizophrenia group; with spouse health in

both these groups; these were statistically significant. Alcohol group showed higher burden levels with patient support dimension.

	df	Mean Square	F	Sig.
BAS spouse related	2	353.453	52.172	.000
BAS health	2	355.161	49.969	.011
BAS support	2	74.859	9.681	.066
BAS routine	2	15.568	3.597	.174
BAS pt support	2	19.188	3.967	.263
BAS responsibility	2	272.438	60.408	.022
BAS other relations	2	20.505	9.432	.003
BAS pt behaviour	2	48.391	11.235	.069
BAS strategy CG	2	14.641	2.534	.082
BAS total	2	4945.891	19.663	.021

TABLE32 GHQ SCORES AMONG SPOUSES

	ALCOHOL		BIPOLAR		SCHIZO-PHRENIA	
GHQ 12	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
>2	57	89.1%	56	87.5%	50	78.1%
<=2	7	10.9%	8	12.5%	14	21.9%

Pearson Chi-Square test p value- 0.006 Significant

Slightly lesser number of spouses were GHQ12 positive in the schizophrenia group. It was a statistically significant difference.

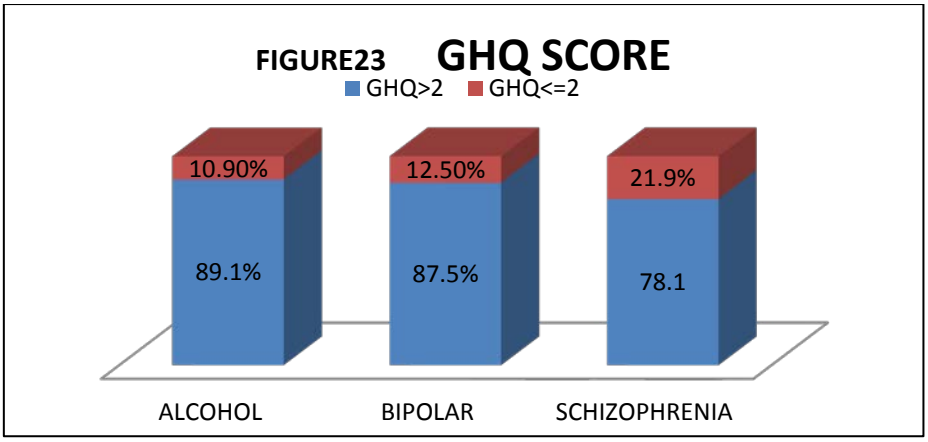


TABLE33 COMPARISON OF TYPE OF BURDEN IN SPOUSES BETWEEN THREE GROUPS:

		Alcohol		Bipolar		Schizophrenia	
		Count	N %	Count	N %	Count	N%
BAS type of burden	Very Severe	13	20.3%	27	42.2%	23	35.9%
	Severe	20	31.2%	22	34.4%	30	46.9%
	Moderate	19	29.7%	10	15.6%	8	12.5%
	Minimal	12	18.8%	5	7.8%	3	4.7%

Chi-square 19.553 df =6. Sig. .003*

Over 50%, 70% and 80% had severe burden levels in alcohol, bipolar and schizophrenia groups. It was statistically significant.

TABLE34 COMPARISON OF QUALITY OF LIFE SCORES BETWEEN SPOUSES OF THREE GROUPS

	Alcohol	Bipolar	Schizophrenia			
	Mean	Mean	Mean	df	F	SIG
Domain1 WHOQOL	25.92	22.81	18.83	2	467.047	.034
Domain2 WHOQOL	21.62	18.36	14.45	2	295.598	.001
Domain3 WHOQOL	12.61	7.75	5.84	2	205.695	.002
Domain4 WHOQOL	30.06	26.09	21.67	2	599.792	.007
1QOL	3.61	2.70	3.89	2	126.481	.033
2QOL	3.98	3.83	2.52	2	145.550	.037

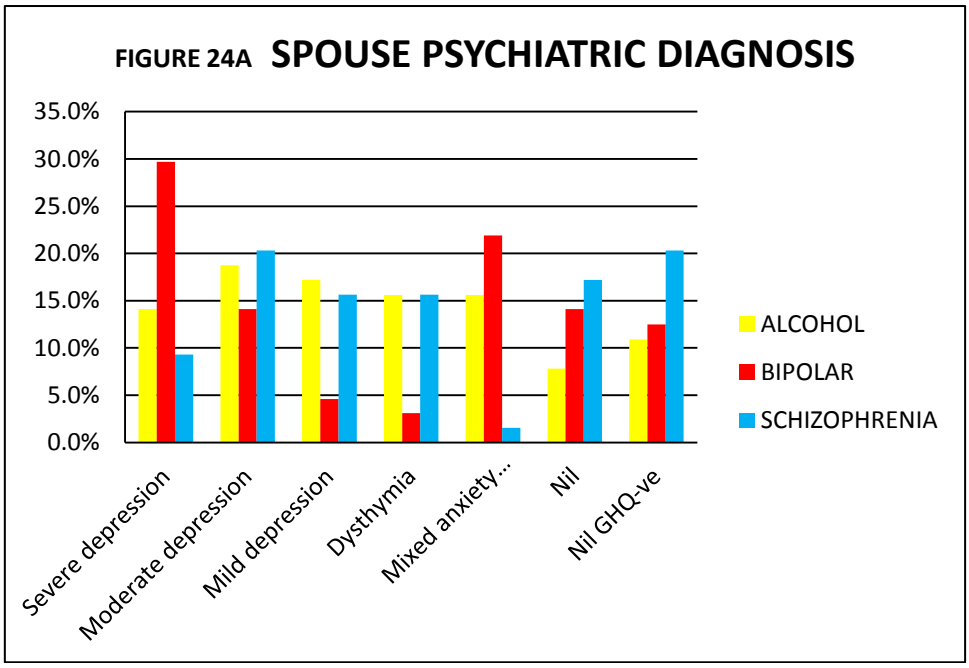
Alcohol and the bipolar groups showed better quality of life than spouses of schizophrenia, in all four domains, and were statistically significant differences.

TABLE 35 COMPARISON OF PSYCHIATRIC DIAGNOSIS IN SPOUSES BETWEEN THREE GROUPS:

		Alcohol		Bipolar		Schizophrenia	
		Count	N %	Count	N %	Count	N%
Psychiatric diagnosis	Severe depression	9	14.1%	19	29.7%	6	9.4%
	Moderate depression	12	18.8%	9	14.1%	13	20.3%
	Mild depression	11	17.2%	3	4.7%	10	15.6%
	Dysthymia	10	15.6%	2	3.1%	10	15.6%
	mixed anxiety and depression	10	15.6%	14	21.9%	1	1.6%
	nil	5	7.8%	9	14.1%	10	15.6%
	GHQ negative	7	10.9%	8	12.5%	14	21.9%

Chi-square 34.519 df 12 Sig. .001*

Alcohol dependence-caring spouses had about 1.5 times more frequent severe depression than schizophrenia group, and just half of the frequency of bipolar disorder group. The differences were statistically significant.



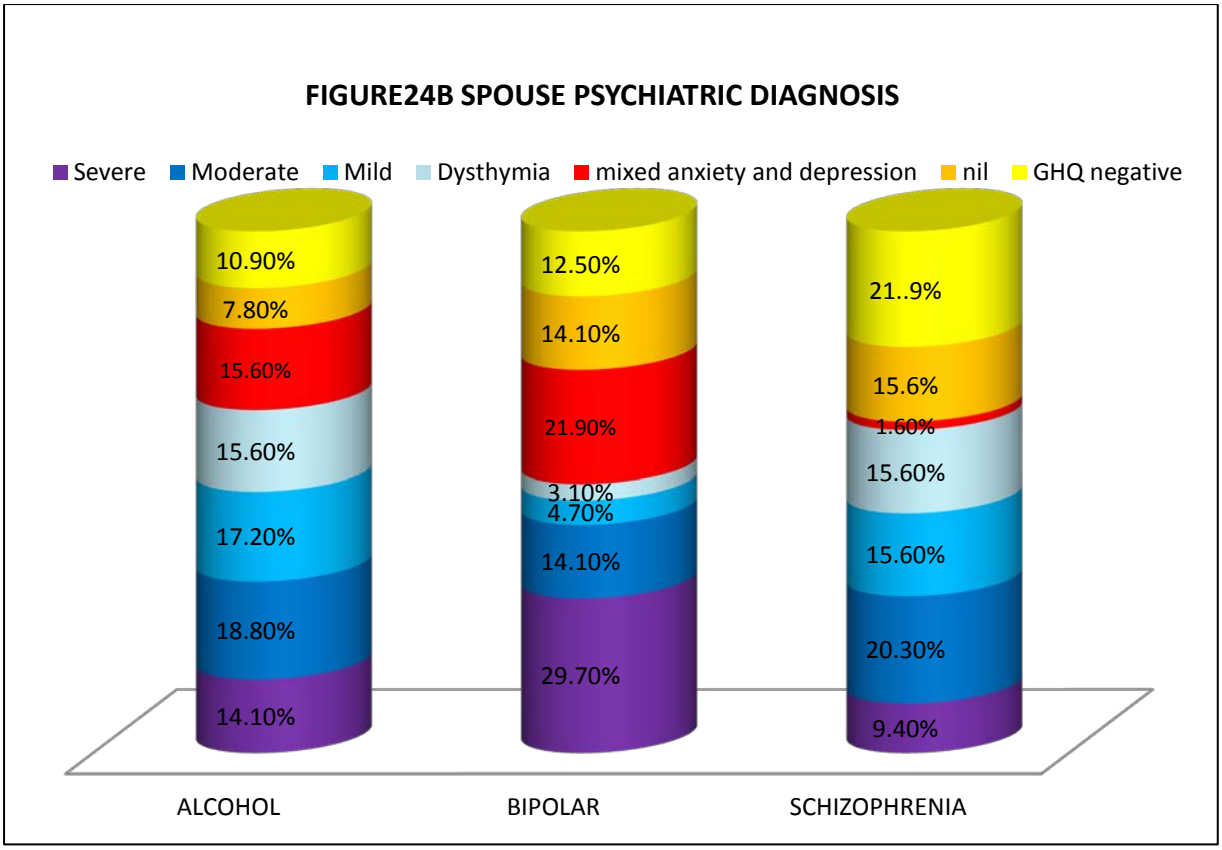


TABLE36 BDI AND HADS SCORES BETWEEN THREE GROUPS

GHQ+ve spouses		N	Mean	Std. Deviation	95% Confidence Interval for Mean		P VALUE	RESULTS
					Lower Bound	Upper Bound		
BDIscore	ALCOHOL	57	18.47	11.276	15.48	21.47		
	BIPOLAR	56	22.25	13.930	18.52	25.98	.215	NS NOT SIG
	SCHIZOPHRENIA	50	19.21	10.271	16.23	22.19		
HADSAscore	ALCOHOL	57	7.61	2.555	6.94	8.29		
	BIPOLAR	56	8.09	3.679	7.10	9.07	.033	SIGNIFICANT
	SCHIZOPHRENIA	50	6.71	.798	6.48	6.94		

Out of the GHQ12 -positive(>2 score) spouses, those from bipolar disorder group showed higher BDI depression and HADS anxiety scores. Only the anxiety score were statistically significant.

TABLE37 BDI SEVERITY

Out of GHQ+ve	ALCOHOL		BIPOLAR		SCHIZOPHRENIA	
BDI SEVERITY	FREQUENCY	PERCENT	FREQUENCY	PERCENT	FREQUENCY	PERCENT
Extremely severe	4	7.0%	7	12.5%	1	2.0%
severe	5	8.8%	12	21.4%	5	9.8%
moderate	12	21.1%	9	16.1%	13	25.5%
Borderline	8	14.0%	2	3.6%	6	11.8%
Mild	3	5.3%	1	1.8%	4	7.8%
Nil	25	43.9%	25	44.6%	22	43.1%

Pearson Chi-Square test p value- 0.129 NS(Not Significant)

About 7%, 12%, and 2% of spouses in the alcohol, bipolar and schizophrenia groups respectively had extremely severe depression. The difference was not significant.

TABLE38 HADS SEVERITY

HADS rating among GHQ+ve		ALCOHOL	BIPOLAR	SCHIZO-PHRENIA
Abnormal	Count	7	11	0
	% within Pt_diag	12.30%	19.60%	0.00%
Borderline Abnormal	Count	2	3	1
	% within Pt_diag	3.50%	5.40%	2.10%
Nil	Count	48	42	50
	% within Pt_diag	84.20%	75.00%	98.03%
TOTAL		57	56	51

Pearson Chi-Square test p value- 0.023 Significant

Schizophrenia-caregiver spouses showed negligible amount of anxiety features and it was a statistically significant difference.

TABLE39 CORRELATION BETWEEN BURDEN DIMENSIONS AND WHOQOL DOMAINS IN SPOUSES OF ALCOHOL DEPENDENCE GROUP:

		Domain1 WHOQOL	Domain2 WHOQOL	Domain3 WHOQOL	Domain4 WHOQOL	@1QOL	@2QOL
BAS spouse related	Sig. (2-tailed)	.058	.035	.045	.010	.046	.092
	Pearson Correlation	-.648	-.784	-.722	-.937	-.716	-.472
BAS health	Sig. (2-tailed)	.089	.094	.062	.043	.018	.026
	Pearson Correlation	-.482	-.460	-.628	-.737	-.886	-.837
BAS support	Sig. (2-tailed)	.080	.076	.044	.039	.077	.096
	Pearson Correlation	-.530	-.549	-.731	-.758	-.544	-.450
BAS routine	Sig. (2-tailed)	.033	.040	.034	.040	.059	.113
	Pearson Correlation	-.799	-.752	-.791	-.753	-.644	-.372
BAS pt support	Sig. (2-tailed)	.119	.120	.062	.107	.001	.143
	Pearson Correlation	-.348	-.346	-.627	-.402	-.991	-.261
BAS responsibility	Sig. (2-tailed)	.141	.132	.103	.067	.035	.024
	Pearson Correlation	-.267	-.297	-.420	-.598	-.783	-.853
BAS other relations	Sig. (2-tailed)	.061	.042	.019	.042	.034	.124
	Pearson Correlation	-.631	-.741	-.880	-.744	-.793	-.327
BAS pt behaviour	Sig. (2-tailed)	.027	.001	.049	.018	.051	.122
	Pearson Correlation	-.835	-.994	-.701	-.888	-.690	-.337
BAS strategy CG	Sig. (2-tailed)	.012	.001	.156	.036	.030	.037
	Pearson Correlation	--.924	--.995	--.220	--.779	--.815	--.774

There was negative correlation between burden dimension scores and WHOQOL domain scores. Increased spouse-related, caregiver routine and strategy dimensions showed poor quality of life scores. These were statistically significant differencs in most of the WHOQOL domains.

TABLE40 CORRELATIONS OF BURDEN WITH QUALITY OF LIFE FOR SPOUSES IN BIPOLAR DISORDER:

		Domain1 WHOQOL	Domain2 WHOQOL	Domain3 WHOQOL	Domain4W HOQOL	1QOL	2QOL
BAS spouse related	Pearson Correlation	-.425**	-0.558**	-.507**	-.404**	-0.207	-.237
	Sig2tail	.000	.000	.000	0.001	0.101	0.06
	N	64	64	64	64	64	64
BAS health	Pearson Correlation	-.393**	-.537**	-0.463**	-.338**	-.190	-0.206
	Sig2tail	0.001	.000	.000	0.006	0.133	0.102
	N	64	64	64	64	64	64
BAS support	Pearson Correlation	-.434*	-.674**	-.611**	-.286*	-.133	-.300**
	Sig2tail	.000	.000	.000	0.022	0.293	0.016
	N	64	64	64	64	64	64
BAS routine	Pearson Correlation	-.423**	-.606**	-.545**	-.387**	-.194	-.223
	Sig2tail	0.001	.000	.000	0.002	0.124	0.076
	N	64	64	64	64	64	64
BAS pt support	Pearson Correlation	-0.203	-.432**	-.376**	-0.159	-.053	-.088
	Sig2tail	0.108	.000	0.002	0.208	0.677	0.49
	N	64	64	64	64	64	64
BAS responsibility	Pearson Correlation	-.453**	-.600**	-.582**	-.444**	-.286**	-.229
	Sig.(2-tailed)	.000	.000	.000	.000	0.022	0.068
	N	64	64	64	64	64	64
BAS other relations	Sig2tail	-.042	-.160	-.082	.019	.097	.061
	Pearson Correlation	0.741**	0.205	0.519	0.884	0.444	0.635
	N	64	64	64	64	64	64
BAS pt behaviour	Pearson Correlation	-0.148	-.349**	-.240	-0.048	.124	.151
	Sig2tail	0.245	0.005	0.056	0.709	0.328	0.234
	N	64	64	64	64	64	64
BAS strategy CG	Correlation	-.565**	-.597**	-.544**	-.421**	-.269**	-.246**
	Sig2tail	.000	.000	.000	0.001	0.032	0.05
	N	64	64	64	64	64	64

The negative correlation between spouse-related and caregiver routine dimensions with psychological and social domains was at a significant level.

TABLE41 CORRELATIONS OF BURDEN WITH QUALITY OF LIFE FOR SPOUSES IN SCHIZOPHRENIA:

Correlations		Domain1 WHOQOL	Domain2 WHOQOL	Domain3 WHOQOL	Domain4 WHOQOL
BAS spouse related	Pearson Correlation	-.569**	-.580**	-.536**	-.536**
	Sig. (2-tailed)	.009	.000	.000	.000
	N	64	64	64	64
BAS health	Pearson Correlation	-.573**	-.600**	-.581**	-.581**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64
BAS support	Pearson Correlation	-.569**	-.646**	-.579**	-.579**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64
BAS routine	Pearson Correlation	-.558*	-.606**	-.580**	-.580**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64
BAS pt support	Pearson Correlation	-.570**	-.592**	-.534**	-.534**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64
BAS responsibility	Pearson Correlation	-.502**	-.491**	-.474**	-.474**
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64
BAS other relations	Pearson Correlation	-.379**	-.369**	-.381**	-.381**
	Sig. (2-tailed)	.002	.003	.002	.002
	N	64	64	64	64
BAS pt behaviour	Pearson Correlation	-.443**	-.491**	-.399**	-.399**
	Sig. (2-tailed)	.000	.000	.001	.001
	N	64	64	64	64
BAS strategy CG	Pearson Correlation	-.462**	-.488**	-.428	-.428
	Sig. (2-tailed)	.000	.000	.000	.000
	N	64	64	64	64

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed).

Spouse-related, health, routine, financial and patient support dimensions negatively correlated significantly with all WHOQOL domains.

TABLE42 BURDEN AND DURATION OF MARRIAGE:

Dependent Variable: BAStotal **Univariate Analysis of Variance**				
group	Marriage_duration	Mean	Std. Deviation	N
Alcohol	10-13 Yrs	74.5652	15.36474	23
	14-17 Yrs	79.8889	14.74046	18
	18-21 Yrs	89.8462	18.04553	13
	>21 Yrs	96.4000	14.96811	10
	Total	82.5781	17.37340	64
Bipolar	10-13 Yrs	96.4375	13.58352	32
	14-17 Yrs	96.7647	13.40956	17
	18-21 Yrs	98.0857	14.28011	5
	>21 Yrs	98.6059	13.40261	10
	Total	94.1719	15.30075	64
Schizophrenia	10-13 Yrs	94.5862	17.43870	29
	14-17 Yrs	99.5909	12.35838	22
	18-21 Yrs	103.4444	12.72901	9
	>21 Yrs	105.0000	9.12871	4
	Total	98.2031	14.97212	64

Tests of Between-Subjects Effects Dependent Variable: BAStotal group * Marriage_duration Sig .001		
Post Hoc Tests Multiple Comparisons: Tukey HSD		
(I) group	(J) group	Sig.
Alcohol	Bipolar	.000
	Schizophrenia	.000
Bipolar	Alcohol	.000
	Schizophrenia	.285
Schizophrenia	Alcohol	.000
	Bipolar	.285

Burden scores increased with duration of marriage generally, most significant difference among schizophrenia and bipolar groups.

TABLE43 DURATION OF CAREGIVING VS TOTAL BURDEN SCORES:

Dependent Variable: BAStotal	**Univariate Analysis of Variance**			
group	Duration_of_ caregiving	Mean	Std. Deviation	N
Alcohol	10-13 Yrs	73.0019	14.88318	37
	14-17 Yrs	77.1351	14.24781	9
	18-21 Yrs	100.8333	12.91112	12
	>21 Yrs	94.0910	13.26650	6
	Total	82.5781	17.37340	64
Bipolar	10-13 Yrs	96.3529	13.16994	34
	14-17 Yrs	96.8750	13.84136	16
	18-21 Yrs	92.2857	15.87151	7
	>21 Yrs	79.2857	21.54619	7
	Total	94.1719	15.30075	64
Schizophrenia	10-13 Yrs	95.2973	16.81247	37
	14-17 Yrs	102.0714	8.38005	14
	18-21 Yrs	110.0000	14.66667	9
	>21 Yrs	98.8889	8.75595	4
	Total	98.2031	14.97212	64
Tests of Between-Subjects Effects: Dependent Variable: BAStotal		Sig.		
group * Duration_of_caregiving		.000		
posthoc tests:	Bipolar	.000		
Alcohol	Schizophrenia	.000		
	Alcohol	.000		
Bipolar	Schizophrenia	.264		
	Alcohol	.000		
Schizophrenia	Bipolar	.264		

Total burden increased till 21 years duration of care in alcohol and schizophrenia groups, beyond which relatively lesser concern is perceived by the spouse. This difference was statistically significant, and Tukey's test reveale bipolar and schizophrenia groups varied the most.

TABLE44 DURATION OF ILLNESS VS TOTAL BURDEN SCORES:

Univariate Analysis of Variance Dependent Variable: BAStotal				
group	Duration_of_illness	Mean	Std. Deviation	N
Alcohol	>21 Yrs	94.3750	12.55772	8
	18-21 Yrs	93.2308	20.29431	13
	14-17 Yrs	78.7059	13.36864	17
	10-13 yrs	76.1538	15.73961	26
Bipolar	>21 Yrs	98.8421	17.70205	9
	18-21 Yrs	94.5769	14.38937	20
	14-17 Yrs	89.1667	13.14735	18
	10-13 yrs	85.2356	13.36784	17
Schizophrenia	>21 Yrs	109.2222	7.59569	9
	18-21 Yrs	103.5455	12.53287	11
	14-17 Yrs	94.0000	13.10035	22
	10-13 yrs	95.2273	17.58769	22

Tests of Between-Subjects Effects Dependent Variable: BAStotal
group * Duration_of_dependence .088

In all the groups as duration of illness increased mean total burden scores progressively increased, but the difference was statistically insignificant.

TABLE45A DURATION OF CAREGIVING AND QUALITY OF LIFE IN SPOUSES IN PATIENT GROUPS:

Dependent Variable: WHOQOL				
group	Duration_of_caregiving	Mean	Std. Deviation	N
Alcohol	10-13 Yrs	91.2432	5.35623	37
	14-17 Yrs	89.4444	4.79873	9
	18-21 Yrs	88.4167	5.88462	12
	>21 Yrs	88.6667	6.62319	6
	Total	90.2187	5.51324	64
Bipolar	10-13 Yrs	75.3235	4.49053	34
	14-17 Yrs	74.3750	5.36501	16
	18-21 Yrs	76.5714	3.99404	7
	>21 Yrs	73.4286	4.11733	7
	Total	75.0156	4.61018	64
Schizophrenia	10-13 Yrs	60.4595	6.35782	37
	14-17 Yrs	61.6429	5.75937	14
	18-21 Yrs	60.7778	8.46726	9
	>21 Yrs	61.0000	5.29150	4
	Total	60.7969	6.37251	64

Tests of Between-Subjects Effects Dependent Variable: WHOQOL		
group * Duration_of_caregiving		Not Sig .715

QOL scores were comparable between groups as differences in means were not significant statistically.

TABLE45B DURATION OF MARRIAGE AND QUALITY OF LIFE IN SPOUSES IN PATIENT GROUPS:

Dependent Variable: WHOQOL				
group	Marriage_duration	Mean	Std. Deviation	N
Alcohol	10-13 Yrs	92.7391	4.79789	23
	14-17 Yrs	89.0000	5.60462	18
	18-21 Yrs	88.0000	4.72582	13
	>21 Yrs	89.5000	6.36396	10
	Total	90.2187	5.51324	64
Bipolar	10-13 Yrs	75.4687	4.23491	32
	14-17 Yrs	74.2941	5.60987	17
	18-21 Yrs	75.4000	3.36155	5
	>21 Yrs	74.6000	4.90351	10
	Total	75.0156	4.61018	64
Schizophrenia	10-13 Yrs	61.2069	6.41081	29
	14-17 Yrs	60.0000	6.13344	22
	18-21 Yrs	60.6667	7.41620	9
	>21 Yrs	62.5000	7.00000	4
	Total	60.7969	6.37251	64
Total	10-13 Yrs	75.2738	13.42929	84
	14-17 Yrs	73.4211	13.47742	57
	18-21 Yrs	76.5556	13.49454	27
	>21 Yrs	78.7917	11.63196	24
	Total	75.3437	13.24820	192

Tests of Between-Subjects Effects Dependent Variable: WHOQOL

group * Marriage_duration .662NotSig

QOL scores were similar between different categories of duration of marriage, and the difference of means was not statisticacally significant.

TABLE46 CORRELATIONS BETWEEN LIFE EVENTS, BURDEN AND QUALITY OF LIFE IN SPOUSES OF ALCOHOL GROUP:

		PSLES_1_yr	BAStotal	WHOQOL
PSLES_1_yr	Pearson Correlation	1	.734**	-.653**
	Sig. (2-tailed)		.009	.004
	N	64	64	64
BAStotal	Pearson Correlation	.734**	1	-.506**
	Sig. (2-tailed)	.009		.009
	N	64	64	64
WHOQOL	Pearson Correlation	-.653**	-.506**	1
	Sig. (2-tailed)	.004	.009	
	N	64	64	64

Burden Total scores correlated negatively with quality of life; as severity increased QOL worsened. Significant life events positively correlated with burden severity, and negatively with QOL scores. The correlations were statistically significant.

TABLE47 LIFE EVENTS, BURDEN AND QUALITY OF LIFE VS DEPRESSION SEVERITY- ALCOHOL DEPENDENCE GROUP:

Spearman's rho	**Correlations**	Depression severity
PSLES_1_yr	Correlation Coefficient	.214
	Sig. (2-tailed)	.089
	N	64
BAStotal	Correlation Coefficient	.232**
	Sig. (2-tailed)	.005
	N	64
WHOQOL	Correlation Coefficient	-.437**
	Sig. (2-tailed)	.000
	N	64
Depression severity	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	64

Both life events and burden had positive correlation with severe grades of depression; The association of burden was statistically significant. QOL scores correlated negatively with the depression severity.

TABLE48 CORRELATIONS BETWEEN LIFE EVENTS, BURDEN AND QUALITY OF LIFE IN SPOUSES OF BIPOLAR ILLNESS GROUP:

		PSLES_1_yr	BAStotal	WHOQOL
PSLES_1_yr	Pearson Correlation	1	.165	-.053
	Sig. (2-tailed)		.194	.680
	N	64	64	64
BAStotal	Pearson Correlation	.165	1	-.237
	Sig. (2-tailed)	.194		.060
	N	64	64	64
WHOQOL	Pearson Correlation	-.053	-.237	1
	Sig. (2-tailed)	.680	.060	
	N	64	64	64

*. Correlation is significant at the 0.05 level (2-tailed).

Burden scores correlated negatively with QOL scores but this result was not statistically significant. Significant life events minimally correlated with increase in burden severity, but this was statistically insignificant. There was no significant correlation with QOL scores.

TABLE 49 LIFE EVENTS, BURDEN AND QUALITY OF LIFE VS DEPRESSION SEVERITY IN BIPOLAR GROUP:

Nonparametric Correlations	Spearman's rho	Depression severity
PSLES_1_yr	Sig. (2-tailed)	.024*
	Correlation Coefficient	.852
	N	64
BAStotal	Sig. (2-tailed)	.042*
	Correlation Coefficient	.743
	N	64
WHOQOL	Correlation Coefficient	-.268
	Sig. (2-tailed)	.032*
	N	64
Depression severity	Correlation Coefficient	1.000
	Sig. (2-tailed)	.
	N	64

Both life events and burden scores had statistically significant correlation positively with depression severity. QOL scores had negative correlation with BDI depression severity, statistically significant.

TABLE 50 CORRELATIONS BETWEEN LIFE EVENTS, BURDEN AND QUALITY OF LIFE IN SPOUSES OF SCHIZOPHRENIA GROUP:

		PSLES_1_yr	BAStotal	WHOQOL
PSLES_1_yr	Pearson Correlation	1	.875**	-.741**
	Sig. (2-tailed)		.000	.000
	N	64	64	64
BAStotal	Pearson Correlation	.875**	1	-.526**
	Sig. (2-tailed)	.000		.000
	N	64	64	64
WHOQOL	Pearson Correlation	-.741**	-.626**	1
	Sig. (2-tailed)	.000	.000	
	N	64	64	64

**. Correlation is significant at the 0.01 level (2-tailed).

Burden total scores correlated negatively with quality of life scores. It was statistically significant. Life events highly positively correlated with increase in burden severity with statistical significance; and had negative correlation with quality of life in spouses from schizophrenia group.

TABLE 51: LIFE EVENTS, BURDEN AND QUALITY OF LIFE VS DEPRESSION SEVERITY:

Nonparametric Correlation	Spearman's rho	Depression severity
PSLES_1_yr	Sig. (2-tailed)	.022*
	Correlation Coefficient	.861
	N	64
BAStotal	Sig. (2-tailed)	.023*
	Correlation Coefficient	.857
	N	64
WHOQOL	Correlation Coefficient	.163
	Sig. (2-tailed)	-.198
	N	64
Depression severity	Correlation Coefficient	1.000
	Sig. (2-tailed)	. ,
	N	64

Life events and aburden scores had high positive correlation(.861 and .857) with severity of depression, and was statistically significant. Higher quality of life negatively correlated with severity of depression, but it was statistically insignificant.

TABLE 52 QUALITY OF LIFE IN SPOUSES VS APATHY IN PATIENTS:

Univariate Analysis of Variance Dependent Variable: WHOQOL				
Group	Apathy_Inventory	Mean	Std. Deviation	N
Alcohol	severe apathy	86.7826	4.31653	23
	moderate	88.5000	5.51856	12
	mild	93.2727	4.64124	22
	no apathy	94.8571	3.02372	7
	Total	90.2187	5.51324	64
Bipolar	severe apathy	72.0000	3.92792	15
	moderate	75.3158	4.55891	19
	mild	77.2000	4.21276	20
	no apathy	74.6000	4.42719	10
	Total	75.0156	4.61018	64
Schizophrenia	severe apathy	54.4375	3.16162	16
	moderate	62.0000	5.76978	32
	mild	66.0000	5.07937	11
	no apathy	62.0000	5.47723	5
	Total	60.7969	6.37251	64

Source		df	F	Sig.
group * Apathy_Inventory		6	2.619	.019
Post Hoc Tests (I) group	(J) group	Sig.		
Alcohol	Bipolar	.011		
	Schizophrenia	.003		
Bipolar	Alcohol	.011		
	Schizophrenia	.000		
Schizophrenia	Alcohol	.003		
	Bipolar	.000		

Increased apathy in the patient as perceived by the caregiver spouse was associated with poor quality of life in all three groups. Difference between the groups was statistically significant, and was the most varying between alcohol and bipolar spouse groups.

TABLE53 BURDEN IN SPOUSES AND APATHY IN PATIENTS:

Univariate Analysis of Variance Dependent Variable: BAStotal				
group	Apathy_Inventory	Mean	Std. Deviation	N
Alcohol	severe apathy	94.5652	9.40419	23
	moderate	83.7500	12.18139	12
	mild	73.9545	16.02521	22
	no apathy	68.2857	24.68950	7
	Total	82.5781	17.37340	64
Bipolar	severe apathy	101.6667	7.54668	15
	moderate	91.3158	17.49620	19
	mild	84.4500	13.87339	20
	no apathy	87.8100	2.09762	10
	Total	94.1719	15.30075	64
Schizophrenia	severe apathy	112.5000	4.60435	16
	moderate	99.9688	8.80427	32
	mild	81.6364	10.97518	11
	no apathy	77.6000	20.52559	5
	Total	98.2031	14.97212	64

Source	df	F	Sig.
group * Apathy_Inventory	6	6.593	.000

(I) group **Post Hoc Tests** Tukey HSD BAStotal	(J) group	Sig.
Alcohol	Bipolar	.000
	Schizophrenia	.000
Bipolar	Alcohol	.000
	Schizophrenia	.166
Schizophrenia	Alcohol	.000
	Bipolar	.166

Severity in the apathy exhibited in the patient was associated with higher burden scores in all the three groups of spouses. But it was most prominent in schizophrenia group and least in bipolar group.

TABLE54 QUALITY OF LIFE IN SPOUSES AND SEVERITY OF ILLNESS:

Dependent Variable: WHOQOL				
group	severity_SADDQ score	Mean	Std. Deviation	N
Alcohol	High (20-45)	85.2273	5.03258	22
	Medium(10-19)	92.0000	3.17130	36
	Low(1-9)	97.8333	2.04124	6
	Total	90.2187	5.51324	64
			SIG .014	

Higher severity of dependence in the patients with alcohol dependence was observed associated with poorer quality of life scores in spouses.

TABLE55 BURDEN IN SPOUSES AND SEVERITY OF ILLNESS:

Dependent Variable: BAStotal				
group	severity_	Mean	Std. deviation	N
Alcohol SADDQscore	High (20-45)	92.3182	13.44614	22
	Medium(10-19)	80.7500	16.21001	36
	Low(1-9)	57.8333	5.30723	6
	Total	82.5781	17.37340	64
rBipolar CGI score	seven	107.9956	2.23607	23
	six	94.9036	1.62761	28
	five	79.3333	1.73205	3
	four	76.0000	2.82843	4
	three	55.6666	1.73205	3
	two	59.0000	.00000	3
	one	0	0	0
	Total	94.1719	15.30075	64
Schizophrenia CGI score	seven	113.4348	3.34156	23
	six	95.7500	4.14062	20
	five	96.0000	1.76383	10
	four	78.3333	1.75119	6
	three	66.2000	1.32254	5
	two	0	0	0
	one	0	0	0
	Total	98.2031	14.97212	64

Tests of Between-Subjects Effects Dependent Variable: BAStotal	Sig.
group * severity_of illness score	.004

(I) group **Post Hoc Tests**	(J) group	Sig.
Alcohol	Bipolar	.000
	Schizophrenia	.000
Bipolar	Alcohol	.000
	Schizophrenia	.037
Schizophrenia	Alcohol	.000
	Bipolar	.037

Though mean burden scores in all three groups increased with increase in severity of patients' illness, posthoc test showed it was statistically different between schizophrenia and bipolar groups, with the finding most prominent in schizophrenia group significantly differing from the bipolar group.

TABLE56 BURDEN AND TIME LAPSED SINCE LAST ADMISSION:

Univariate Analysis of Variance Dependent Variable: BAStotal				
group	Time_Since_Last Admission	Mean	Std. Deviation	N
Alcohol	<1 Wk	79.2222	16.78780	18
	1 Wk-1 Month	95.5000	14.84924	2
	1-3 Months	81.8000	10.08464	5
	>3Months	83.5641	18.51002	39
	Total	82.5781	17.37340	64
Bipolar	<1 Wk	89.2500	23.38625	4
	1 Wk-1 Month	91.0588	17.43011	17
	1-3 Months	90.0000	15.64070	20
	>3Months	100.9565	9.36860	23
	Total	94.1719	15.30075	64
Schizophrenia	<1 Wk	112.8750	2.58775	8
	1 Wk-1 Month	96.8095	14.78722	21
	1-3 Months	102.1333	11.06388	15
	>3Months	90.8500	16.07965	20
	Total	98.2031	14.97212	64

Tests of Between-Subjects Effects Dependent Variable: BAStotal		Sig.
group * TIME_SINCE_LAST_ADMISSION		.002

(I) group **Post Hoc Tests**	(J) group	Sig.
Alcohol	Bipolar	.000
	Schizophrenia	.000
Bipolar	Alcohol	.000
	Schizophrenia	.302
Schizophrenia	Alcohol	.000
	Bipolar	.302

Over the first month after last admission the three groups show varying pattern of burden in spouses, with sudden rebound increase in the alcohol group prominently, decrease in schizophrenia, and an increase after 3rd month in bipolar group on average. The differences were more significant between the schizophrenia and bipolar groups.

TABLE57 QUALITY OF LIFE AND FREQUENCY OF ICU ADMISSIONS:

Dependent Variable: WHOQOL				
group	Frequency_of_ICU_admissions_(for_suicidal DSHdelirium)__in_10_yrs	Mean	Std. Deviation	N
Alcohol	>6	88.0000	.00000	2
	5-6	87.6154	5.29998	13
	3-4	88.5000	5.09733	30
	1-2	95.3636	3.52910	11
	0	94.3750	3.46152	8
	Total	90.2187	5.51324	64
Bipolar	>6	0000	.00000	0
	5-6	75.5333	4.15532	15
	3-4	73.9167	4.39074	36
	1-2	76.6000	4.44972	5
	0	78.0000	5.50325	8
	Total	75.0156	4.61018	64
Schizophrenia	>6	53.8333	1.16905	6
	5-6	56.0000	3.46410	24
	3-4	63.3846	3.84141	13
	1-2	67.0909	4.41485	11
	0	66.2000	5.22388	10
	Total	60.7969	6.37251	64

Tests of Between-Subjects Effects Dependent Variable: WHOQOL	Sig.
group * Frequency_of_ICU_admissions	.000

(I) group **Post Hoc Tests**	(J) group	Sig.
Alcohol	Bipolar	.000
	Schizophrenia	.000
Bipolar	Alcohol	.000
	Schizophrenia	.000
Schizophrenia	Alcohol	.000
	Bipolar	.000

Number of ICU admissions was associated with decrease in QOL scores earlier in the alcohol group, and a little later after the 4th admission on average in the schizophrenia group. The findings were statistically significant between all the three groups in posthoc tests.

TABLE58 BURDEN IN SPOUSES AND FREQUENCY OF ICU ADMISSIONS:

group Dependent Variable: BAStotal	Frequency_of_ ICU_admissions in_10_yrs	Mean	Std. Deviation	N
Alcohol	>6	89.5000	.70711	2
	5-6	92.9231	17.12922	13
	3-4	86.1667	14.94607	30
	1-2	70.8182	17.05766	11
	0	71.7500	14.77208	8
	Total	82.5781	17.37340	64
Bipolar	>6	0	0	0
	5-6	85.2667	16.54201	15
	3-4	94.8889	14.48108	36
	1-2	105.0000	6.04152	5
	0	100.8750	13.51652	8
	Total	94.1719	15.30075	64
Schizophrenia	>6	111.5000	7.06399	6
	5-6	107.2500	9.43283	24
	3-4	93.0000	13.26650	13
	1-2	94.8182	8.95341	11
	0	79.0000	13.83233	10
	Total	98.2031	14.97212	64

Tests of Between-Subjects Effects Dependent Variable: BAStotal	Sig.
group * Frequency_of_ICU_admissions __in_10_yrs	.000

Post Hoc Tests **Multiple Comparisons** Dependent Variable: BAStotal Tukey HSD						
(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Alcohol	Bipolar	-11.5938*	2.44187	.000	-17.3651	-5.8224
	Schizophrenia	-15.6250*	2.44187	.000	-21.3963	-9.8537
Bipolar	Alcohol	11.5938*	2.44187	.000	5.8224	17.3651
	Schizophrenia	-4.0312	2.44187	.227	-9.8026	1.7401
Schizophrenia	Alcohol	15.6250*	2.44187	.000	9.8537	21.3963
	Bipolar	4.0312	2.44187	.227	-1.7401	9.8026

Number of ICU admissions were associated with changes in the perceived burden levels, the latter increased in alcohol and schizophrenia groups in spouses, but was decreased in bipolar group after 4th admission on average. Tukey's test showed profound difference in this observation between schizophrenia and bipolar groups.

DISCUSSION:

SOCIODEMOGRAPHIC FACTORS:

The means of age of patients in the three groups were similar around 36-38 years and age of spouses were about 33-34 years. The three groups –alcohol dependence, bipolar and schizophrenia had generally similar distribution of age, education, children more than 15 years of age, religion, family type, domicile, and patient occupation, all of these variables were found to be statistically not significant between the three groups, and so the groups were comparable. The distribution of patients' net unemployed duration over the past 10 years, annual family income, and duration of illness were also found to be statistically not significant and the groups were comparable between themselves over the output variables. So were the spouse characteristics like age, education, life events and duration of caregiving, which were found to be statistically not significant, and the three groups of spouses were comparable.

Children less than 15 years of age, duration of marriage, duration of current unemployment, patients' net contribution to family in the past year, were the variables which were found to be statistically significant between the three groups of study.

Stressful life events score was higher in spouses of alcohol and schizophrenia groups though it was not statistically significant.

DURATION FACTORS IN THREE GROUPS:

There was some statistically insignificant difference between the three groups in the duration of illness, with 40.6% of patients in alcohol dependence group coming under 10-13 years of illness category more than other two groups; around 46%, 71% and 51% having 14 to 21 years of illness in the three groups respectively. Nevertheless spouses from all three

groups had comparable duration of caregiving as the differences were statistically nonsignificant. There were 57.8%, 64% and 57.8% of spouses from three groups respectively in the 10 to 13 years of caregiving category, and around 33% of spouses each in 14 to 21 years categories.

FAMILY BURDEN IN FEMALE SPOUSES –AMONG THREE GROUPS:

In the study about 82% and 76% spouses had severe levels of burden in schizophrenia and bipolar disorder groups, and around 81% from alcohol dependence group had severe and moderate severity of burden of care.

About 20%, 31% and 29.7% of spouses in the alcohol dependence group had very severe, severe and moderate burden of care respectively; 42%, 34% and 15% of the spouses in bipolar group, and 35%, 46.9% and 12% in spouses of schizophrenia patients group respectively had very severe, severe and moderate burden. The finding in this study was statistically significant. These results was identical to those from studies in South India in comparison studies by Swapna et al and Jayakrishnaveni et al in burden severity were observed between alcohol and bipolar(45% and 66% severe burden), and schizophrenia and bipolar groups(38% and 34% severe burden) respectively but without statistically significant differences.

Even without the relapses, exacerbations and the physical and psychological damage created with violent behaviour in manic episodes that contributes immensely to profound levels of burden among spouses, the alcohol dependence and schizophrenia groups too had severe burden levels in spouses. This may be due to increased cumulative expenditure over physical complications in the alcohol dependence group, and due to excess carer routine involving maintenance of personal care of patients with schizophrenia.

The severe burden was perceived by more than 50% of spouses in three groups. Alcohol dependence, bipolar and schizophrenia groups all three had statistically significant severe degree (-total score in range 81 to 100 is severe) of mean burden scores, with spouses in schizophrenia slightly more than other two groups. The burden severity in schizophrenia caregivers were comparable to Kumar et al.[47]

The spouses had higher burden levels in spouse related dimension among bipolar group, and in taking responsibility and other relations dimensions among schizophrenia group; spouse health related burden was higher in both bipolar and schizophrenia groups. Spouses of alcohol dependence group were having similar burden levels to the other groups in these dimensions.

In previous bipolar affective disorder and schizophrenia studies[127,128] it was found that caregivers from both groups suffered similar levels of burden and used a similar pattern of coping, had a positive correlation with physical and mental health, caregivers' routine, taking responsibility and also the total scores in both groups.

Duration of marriage, illness and caregiving, and clinical variables of study :

Burden scores increased progressively as the duration of marriage increased, in all three groups, but showed statistically significant difference; with Tukey's posthoc multiple comparison test the pattern was least in bipolar group and best seen in schizophrenia group.

In all three groups as the duration of illness increased mean total burden scores progressively increased generally but the difference was statistically not significant. Total burden level was seen increasing until late, with increase in duration of caregiving by spouse in all three groups; but it was interestingly decreased in the >21 years category, in alcohol and schizophrenia groups' spouses. But this decrease was observed starting even before from

18 years of caregiving category itself in the bipolar group. These findings were statistically significant, with most difference observed between the bipolar and schizophrenia groups.

The severity in the apathy exhibited in the patient and as perceived by the spouse as mentioned in the caregiver report of the apathy inventory, was associated with higher burden scores in all the three groups of spouses. But it was most prominent in schizophrenia group and least in bipolar group.

Burden levels in spouses of all three groups were increased with increase in the severity of illness in the patients. This result was statistically significantly different, posthoc comparisons showed schizophrenia and bipolar groups were more statistically different. In some studies, severity of psychotic symptoms and degree of disability are related to higher levels of family burden with schizophrenia (Ochoa et al, 2008); in few other studies, burden was higher when patients' symptoms and disability were more severe, especially for bipolar affective disorder (Magliano et al, 2009) more burden than with alcohol dependence syndrome (Chakrabarti et al[3], 1992).

Within the first week following admission burden levels are decreased probably from transient relief on admission having secured the patient to hospital treatment, but over the following weeks burden levels rise back again generally in all three groups of spouses. In the alcohol group immediately after the second week burden levels peak rapidly, the possibility of a relapse is understood. Peaks of burden levels are reached mostly past the third month in spouses of bipolar group, and possibility of another episode is suggested as the patients are sampled when they present for review at the outpatient department. The finding is statistically significant, but is more significant in the difference between bipolar and schizophrenia groups.

The three groups were statistically significant between each other in their mean total burden scores in relation to frequency of ICU admissions, confirmed in Tukey's test. Number of intensive care unit admissions showed varying changes in the burden perceived in the spouses –in the alcohol dependence group it increased drastically after the 2nd admission, and similarly in the schizophrenia group it was reduced after the 4th admission to ICU.

QUALITY OF LIFE IN FEMALE SPOUSES:

All the domains of WHOQOL showed poorer scores for quality of life in the spouses from schizophrenia group, compared to the other two groups, and the differences were statistically significant. This could be due to the continuous course and spouse's responsibility in caring for the patients who may be with negative symptoms predominantly.

QOL versus Duration of caregiving and Clinical variables:

Diagnosis does not predominantly play a role in QOL as the latter depends on extra-psychiatric variables, principally marital status and income (Kovess-Masfety et al, 2006). While some authors reported better QOL in BPD than in SZ (Chand et al, 2004), others differed. QOL was markedly impaired in patients with BPD, even when clinically euthymic (Michalak et al, 2005)

The scores on quality of life in spouses of all three groups were comparable between different categories of duration of caregiving, and differences in means were statistically not significant between the groups. Similarly quality of life in spouses of all three groups were comparable; differences in means were statistically not significant between the three groups.

Severe apathy was found associated with poor quality of life in spouses in all three groups. It was found to be statistically significant in alcohol dependence group compared to the other two groups.

Higher the dependence severity in alcohol dependent patients, poorer was the spouses' quality of life.

The differences in the three groups were statistically significant between each other in their mean QOL scores in spouses in relation to frequency of ICU admissions of patients, confirmed in Tukey's test. Number of intensive care unit admissions showed typical response in the quality of life in the spouses –in the alcohol dependence group QOL decreased drastically after the 2nd admission, and similarly in the schizophrenia group QOL was reduced after the patients' 4th admission on average to ICU care in hospital for emergencies that include suicidal attempt/deliberate self harm, in the schizophrenia group, and suicidal attempt/delirium tremens/seizures among other complications in the alcohol dependence group.

PSYCHIATRIC MORBIDITY OBSERVED IN SPOUSES (FEMALE) :

In the alcohol dependence, bipolar and schizophrenia groups about 89%,87% and 78% respectively were GHQ12 positive,; 91%, 84% and 84% respectively among the GHQ-positive spouses showed a valid psychiatric diagnosis after structured clinical interview. This showed that there is high positive correlation of GHQ12-positivity and getting a psychiatric diagnosis. Upto 10 % of the female spouses did not get a diagnosis even though with a GHQ12-positivity, and these spouses could be suffering from symptoms at sub-threshold levels; they may be still at-risk for developing diagnosable psychiatric morbidity over time. Results were similar to the study by Kishore et al which showed 90% spouses of alcohol dependent patients getting positive for probable psychiatric morbidity, 72% of them having diagnosable psychiatric morbidity.

About 50%, 48% and 45% spouses in the alcohol dependence, bipolar and schizophrenia groups respectively had diagnosable major depression, but the difference was

statistically significant. Severe depression was found in 14.1%, 29.7% and 9.5% of the spouses, and moderate depression was found in 18.8%, 14.1% and 20.6% of the spouses, in the three groups respectively. 17% and 15.6% spouses in the alcohol dependence group, 15.9% and 15.9% in the schizophrenia group had mild depression and dysthymia respectively. 15.6% and 21.9% had mixed anxiety and depressive symptoms in the alcohol dependence and bipolar disorder groups respectively. The results were similar to studies from other nearby Asian studies(Elmahdi et al[137]).

Compared to studies by Kishore etal and Mathews et al in south Indian population where 20%, 17% and 11% , and 5%, 9% and 15% respectively had severe, moderate and mild depression among the spouses of alcohol dependence syndrome, this study found similar pattern of depression in 14%, 18% and 17% of spouses.

Comparatively lesser depression frequency was found in schizophrenia group probably due to adaptation with better coping strategies over time to the chronic course with more predominant negative symptoms. This is unlike the alcohol dependence and bipolar disorder groups where frequent physical complications and acute and troublesome neuropsychiatric manifestations in the former, and acute exacerbations and episodic and fluctuating course in the latter are major contributors to the morbidity in spouses.

The debaucheries of problematic episodes in bipolar affective disorder resulted in increased psychiatric morbidity in the spouses compared to other two groups. Even without these frequent exacerbations spouses in alcohol dependence still showed comparable burden and depression levels and this points to the chronic and incarcerating problems interpersonal, financial, and social milieu, perceived by the female spouses. South Indian studies recently have observed a similar trend and found depressive disorders as the commonest morbidity in

these spouses[138]. Western studies also corroborate anxiety and depressive disorders among female spouses of alcohol dependent patients[139,140].

Psychiatric complications and consequences from alcohol dependence were observed in a substantial proportion of the group –14% and 5% had psychosis and mood symptoms; 12.51% and 12.55% had delirium and seizures respectively; about 50% had no or only withdrawal symptoms. This result is in tandem with other similar studies including Kishore et al[13] and unlike some studies like Bhowmick et al[24].

COMPARISON BETWEEN BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY AMONG THE THREE GROUPS:

The spouses from alcohol dependence group showed negative correlation between burden dimensions and quality of life domains. Spouse related burden scores were associated with poor WHOQOL scores in psychological, social and environmental domains (2,3,and 4) among spouses. Support burden, patient behaviour and other relationships dimensions were negatively associated with WHOQOL domains 3 and 4 significantly. Caregiver routine was associated with worse quality of life scores in all the four WHOQOL domains, and caregiver strategy with all but social domains.

There was negative association between spouse-related, caregiver routine, support and taking responsibility dimensions of burden, and psychological and social domains of quality of life in the spouses of bipolar disorder patients, and it was significant.

The spouse-related, health, support-related, caregiver routine and patient support dimensions were negatively correlated with coefficients less than -0.5 –with all the four domains of quality of life, in the spouses o f schizophrenia group.

Burden total scores in spouses of alcohol dependence group correlated negatively with quality of life scores; as severity of burden increased quality of life worsened. Significant life events positively correlated with increase in severity of burden; life events had negative correlation with the quality of life scores, denoting that major stressful events also contributed to decrease in quality of life, most among spouses in alcohol dependence group than other groups; the differences were statistically significant. Both life events and burden had positive correlation with severe grades of depression; the association of burden was statistically significant; QOL scores correlated negatively with the depression severity.

The burden total mean scores in the spouses of bipolar disorder group correlated negatively with quality of life scores; as severity of burden increased quality of life worsened. But this was neither profound not statistically significant. Significant life events slightly positively correlated with increase in severity of burden; there was no major significant correlation with the quality of life scores. Both life events and burden scores had statistically significant correlation positively with depression severity; QOL scores had negative correlation with BDI depression severity, statistically significant.

The mean of total burden scores in the schizophrenia group correlated negatively with quality of life scores; as severity of burden increased quality of life worsened. It was statistically significant. Significant life events highly positively correlated with increase in severity of burden, with statistical significance; there was also significant negative correlation of life events with the quality of life. Life events and burden scores had high positive correlation(.861 and .857) with severity of depression, and was statistically significant. Higher quality of life negatively correlated with severity of depression, but it was statistically insignificant.

.

SUMMARY:

The patients were recruited from the psychiatry outpatient department at this tertiary care hospital. With consecutive sampling 64 patients diagnosed with alcohol dependence, 64 with bipolar affective disorder, and 64 patients with schizophrenia, mutually exclusive of each other diagnosis and who were fulfilling the study criteria, and consented for participation were taken into the study, along with their female spouses who also had to give informed consent for their participation. Sociodemographic data were collected using a self designed proforma. Family burden of the caregiving female spouses was assessed with Burden assessment schedule—BAS. Their quality of life was assessed with WHOQOL (BREF) scale. Psychiatric morbidity in them was assessed with MINI plus—Mini International Neuropsychiatric Interview, in the spouses who screened positive with General Health Questionnaire—GHQ; and these subset of spouses took up the selfreporting scales Beck Depression Inventory and Hospital Anxiety and Depression Scale.

Most of the patients were under 40 years of age, most finished 8th class, most from urban background, more were with less than 17yrs of marriage; more chronic unemployment was noted in schizophrenia group. Over 80% were having over 20 years of illness.

Most spouses were less than 35years of age, most were into high school, over 80% were employed and over 60% contributed more than half share of family income; about 45-55% were caring their husbands for more than 17years.

Severe burden levels were observed in over 50% of spouses in all three groups. Patient support, spouse-related, and taking responsibility dimensions, were affected significantly in alcohol dependence, bipolar, and schizophrenia groups respectively.

The quality of life decreased significantly with increasing burden in all groups. Spouse-related and caregiver routine burden dimensions affected quality of lfe in alcohol dependence and bipolar groups, while patient support dimension affected in addition in the schizophrenia group.

Though caregiving spouses from schizophrenia group had poorer quality of life, frequent ICU admissions increased burden and worsened quality of life earliest in the alcohol dependence-caring group of spouses. Duration of illness and caregiving had a cumulative effect on burden levels at least upto 20 years of age. Significant life events had positive correlation with burden, and negative correlation with quality of life predominantly in alcohol and schizophrenia groups of spouses. Apathy level and the severity of illness in the patients contributed significantly to the burden scores and poor quality of life, in all three groups.

Over 85% of all spouses from the three groups had positive GHQ scores. Over 45% of spouses in all three groups had some level of diagnosable depression, that magnifies further the caregiving distress. Spouses from alcohol dependence group had 1.5 times more frequent severe depression than the schizophrenia group, and half the time when compared to bipolar group. Depression severity in the spouses was strongly associated with greater burden levels and poorer quality of life in the three groups.

CONCLUSION:

Alcohol dependence, bipolar disorder and schizophrenia are few of the most disabling psychiatric illnesses worldwide. The study was aimed at comparing the differences in the family burden, quality of life and psychiatric morbidity among the female spouses of patients with these disorders. All the three groups were comparable in terms of duration of illness in patients, and duration of caregiving and age and education of spouses.

Majority of the female spouses from all the three groups of study had profound family burden with more than 50% having severe levels, with those from bipolar and schizophrenia groups showing more frequency -76% and 82% respectively, that was statistically significant.

Quality of life was slightly more less in schizophrenia group compared to the other groups. The quality of life correlated negatively with the burden severity in all three groups.

Psychiatric morbidity was more frequent in spouses caring patients with alcohol dependence, followed by those of bipolar disorder group. Severe depression was found more frequently in spouses of alcohol and bipolar groups compared to schizophrenia group. Depression severity and burden severity positively correlated significantly in all three groups.

Severity of symptoms and the apathy in the patients, significantly correlated with the burden observed in the spouses in all the three groups. Significant life events showed association with severity of burden levels in alcohol dependence and schizophrenia groups. Association of increased burden levels and poorer quality of life with severity of adverse consequences in alcohol and with episodes in bipolar disorder groups was significant.

Increased burden of care, poor quality of life and psychiatric morbidity in female spouses are not limited to only severe mental disorders like bipolar disorder and schizophrenia, but are also seen profoundly in other mental and behavioural disorders like

alcohol dependence syndrome. This warrants specific spouse/family-focused psychological treatment approaches and further supportive measures for spouses, in view of preventing psychiatric morbidity in spouses and improving treatment adherence and prognosis in patients of alcohol dependence, bipolar disorder and schizophrenia.

LIMITATIONS:

1. We need to substantiate the findings from this study with larger sample size, especially because of the fewer number of patients and spouses in above 50 years of age group, which then can highlight the effects of additional personal physiological(physical constraints due to age, peri- and post-menopausal physical and psychological) factors on the quality of life.
2. The duration of continuous treatment and compliance to drug intake are factors difficult to assess, but nevertheless are important factors which contribute to the severity of psychiatric illness in the patient.
3. Further studies in community setting are needed to corroborate the findings of burden levels and psychiatric morbidity in female spouses from this study in a tertiary hospital background, in this part of South India.
4. Influence of perimenopausal and personality factors on the perceived burden could not be elaborated in detail in the study. So further study with larger standardized sample is needed in view of these limitations.

BIBLIOGRAPHY:

1. American Psychiatric Association (1994) Diagnostic and statistical manual of mental disorders. 4th ed. APA: Washington, DC.

2. Berlim, M.T. & Fleck, M.P. (2003) "Quality of life": a brand new concept for research and practice in psychiatry. Revista Brasileira de Psiquiatria, 25, 249-252.

3. Chakrabarti, S., Kulhara, P., Verma, S.K. (1992) Extent and determinants of burden among families of patients with affective disorders. Acta Psychiatrica Scandinavica, 86, 247-252.

4. Thara, R., Padmavati, R., Kumar, S., et al (1998) Instrument to assess burden on caregivers of chronic mentally ill. Indian Journal of Psychiatry, 40, 21-29.

5. Chakrabarti S, Raj L, Kulhara P, Avasthi A, Verma SK. Comparison of the extent and pattern of family burden in affective disorders and schizophrenia. Indian J Psychiatry 1995;37:105-112.

6. Zarit SH, Reever KE, Bach-Peterson J. Relatives of the impaired elderly: correlates of feeling of burden Gerontologist. 1980;20(6):649-655.

7. Hoenig J et al. The schizophrenic patient in the community and his effect in the household. Intl Journal of social psychiatry. 1966;12:165-176.

8. Vieta Pascual E, Torrent Font C, Martínez-Arán A, Colom Victoriano F, Reinares Gabnepen M, Benabarre Hernández A,Comes Forastero M, Goikolea Alberdi JM. A user-friendly scale for the short and long term outcome of bipolar disorder: the CGI-BP-M.

9. Secker DL and Brown RG. Cognitive behavioural therapy (CBT) for carers of patients with Parkinson's disease: a preliminary randomised controlled trial. *J Neurol Neurosurg Psychiatry* 2005; 76(4): 491-7.

10. van Wijngaarden B, Schene A, Koeter M, Becker T, Knapp M, Knudsen HC, Tansella M, Thornicroft G, Vazquez-Barquero JL, Lasalvia A and Leese M. People with schizophrenia in five countries: conceptual similarities and intercultural differences in family caregiving. *Schizophrenia Bulletin* 2003; 29(3): 573-586.

11. Zarit SH, Todd PA and Zarit JM. Subjective burden of husbands and wives as caregivers: a longitudinal study. *Gerontologist* 1986; 26(3): 260-6.

12. Go Endo1, Hirokazu Tachikawa2 How perceived social support relates to suicidal ideation: A Japanese social resident survey Int J Soc Psychiatry May 2014 vol. 60 no. 3 290-298

13. M. Kishor, Lakshmi V. Pandit, and R. Raguram Psychiatric morbidity and marital satisfaction among spouses of men with alcohol dependence Indian J Psychiatry. 2013 Oct-Dec; 55(4): 360–365.

14. Global Status Report on Alcohol and health. World Health Organization (WHO). Geneva. 2014.

15. Gururaj G, Girish N, Benegal V. New Delhi: Regional Office for South-East Asia; 2006. Burden and Socio-Economic Impact of Alcohol-Bangalore Study.

16. Ray R. The Extent, Pattern and Trends of Drug Abuse in India: National Survey. Ministry of Social Justice and Empowerment and United Nations Office on Drugs and Crime. 2004.

17. Steinglass P. The impact of alcoholism on the family. Relationship between degree of alcoholism and psychiatric symptomatology. J Stud Alcohol. 1981;42:288–303. [PubMed: 7278273]

18. Tomori M. Personality characteristics of adolescents with alcoholic parents. Adolescence. 1994;29:949–59.

19. Hurcom C, Copello A, Orford J. The family and alcohol: Effects of excessive drinking and conceptualizations of spouses over recent decades. Subst Use Misuse. 2000;35:473–502.

20. Halasyamani MK, Davis MM, Bhattacharjee S. Spousal substance use and domestic violence reported by pregnant women in rural south. Indian J Gen Intern Med. 1997;12(Suppl 1):127.

21. Charles L. Bowden, Vivek Singh. "Long-Term Management of Bipolar Disorder." Review of Psychiatry series, volume24: *Advances in Treatment of Bipolar Disorder* (American Psychiatric Publishing Inc., 2005).

22. Chandrasekaran R, Chitraleka V. Patterns and determinants of coping behaviour of wives of alcoholics. Indian J Psychiatry. 1998;40:30–4.

23. Rao TS, Kuruvilla K. A study on the coping behaviours of wives of alcoholics. Indian J Psychiatry. 1992;34:359–65. [PMCID: PMC2982974] [PubMed: 21776145]

24. Bhowmick P, Tripathi BM, Jhingan HP, Pandey RM. Social support, coping resources and codependence in spouses of individuals with alcohol and drug dependence. Indian J Psychiatry. 2001;43:219–24. [PMCID: PMC2956145] [PubMed: 21407858]

25. World Health Organization, Burden of Mental and Behavioral Disorders, The World Health Report, Mental health: New understanding, New hope; Geneva, world Health Organization 2001.

26. Ponnudurai et al. Suicide in Madras. Indian J Psychiatry 1980;22:203-205.

27. Rihmer z, Angst J. Mood Disorders: Epidemiology, Kaplan and Sadock's Comprehensive Textbook of Psychiatry, 8th Ed., Editors- Sadock B.J. and Sadock V.A., Philadelphia: Lippincott Williams and Willkins; 2005, pp. 1575-1581.

28. Dude KC. A study of prevalence and biosocial variables in mental illness in a rural and urban community in Uttar Pradesh. India Acta Psychiatry Scand 1970;46:327-359.

29. Trivedi S, Chandrashekaran R, Venugopalan M. An epidemiologic study of psychiatric morbidity in rural area of Pondicherry. Abstracts 41st annual Conference of Indian Psychiatric Society, 1988.

30. Schuckit MA. Alcohol Related disorder, Kaplan and Sadock's Comprehensive Textbook of Psychiatry, 8th Ed, Editors- Sadock B.J. and Sadock V.A., Philadelphia: Lippincott Williams and Wilkins; 2005. pp. 1168-1187.

31. ICMR-CAR-CMH. Longitudinal study of mental health problems in a PHC area. Indian Council of Medical Research Centre for advanced research on community mental health. NIMHANS, Bangalore, Unpublished report.

32. Chakravarthy C. Community workers estimate of drinking and alcohol related problems in rural areas. Indian J Psychol Med 1990; 13:49-56.

33. Platt S. Measuring the burden of psychiatric illness of the family: an evaluation of rating scales. Psychological Medicine 1985; 15:383-393.

34. Sadock, B., Sadock, V., Ruiz, P. (2009) Kaplan and Sadock's Comprehensive Textbook of Psychiatry 9th Edition: Lippincott Williams & Wilkins: Philadelphia, P.A.

35. Mills E. Living with Mental Illness: A Study in East London, London: Routledge & Kegan Paul; 1962.

36. Grad J, Sainsbury P. Evaluating a community care service. In Trends in Mental Health Services, Editors – Freeman H and Farndale J Oxford; Pergamon:1963.

37. Perlick, D, Rosenbeck R, Kaczynski R, Swartz M. Specia section on CATIE baseline data. Psychiatric Services 2006;57:1117-26.

38. Fadden G, Bebbington P and Kuipers L. The burden of care: The impact of functional psychiatric illness on the patient's family. Br J Psychiatry 1987; 150:285-292.

39. Francell CG, Conn VS, Gray DP. Familie's Perceptions of Burden of Care for Chronic Mentally III Relatives. Hosp Community Psychiatry 1988;39:1296-1300.

40. Caqueo-Urizar, A, & Gutierrez-Maldanado, J: Quality of life in caregivers of patients with schizophrenia: A literature review. Health and quality of life outcomes. 2009; 7:84.

41. Magana, S., Garcia, J., Hermandez, M., & Cortez, R: Psychological distress among Latino family caregivers of adults with schizophrenia: The roles of burden and stigma: Psychiatric Services 2007; 58:378-384.

42. Baronet AM: Factors associated with caregiver burden in mental illness: A critical review of the research literature. Clin Psychol Rev. 1999; 19(7):819-841.

43. Chien W., Chan, S., & Morrissey, J: The perceived burden among Chinese family caregivers of people with schizophrenia: Journal of Clinical Nursing. 2007;16:1151-1161.

44. Lloyd H, Sing P, Merritt R, Shetty A, Yiend J, Singh S et al.: A comparison of levels of burden in Indian and White Parents with a son or daughter with schizophrenia: Int J Soc Psychiatry. 2010.

45. Lanzara D, Cosentino U, Lo Maglio: Problems of patients with schizophrenia disorders and of their families: Epidemiol Psychiatr Soc. 1999;8(2):117-30.

46. Sunil Srivastava: Perception of burden by caregivers of patients with schizophrenia: Indian Journal of Psychiatry. 2005;47:14-152.

47. Kumar S, Mohanty S: Spousal burden of care in schizophrenia: J Indian Acad Appl Psychol. 2007;33(2):189-194.

48. Martin-Yellow Is: The burden of schizophrenia on the family: A study from Nigeria. Br J Psychiatry. 1992; 161:779-782.

49. Trivedi JK, Dalal Pk, Kalra H: Family burden and coping strategy in relatives of schizophrenia patients: Indian J Psychiatry Supplement 2003;106.

50. Provencher HL, Muser KT: Positive and negative symptom behaviour and caregiver burden in the relatives of persons with schizophrenia: Schizophr Res. 1997; 26:71-80.

51. Gopinath PS, Chaturvedi SK: Distressing behaviour of schizophrenics at home: Acta Psychiatr Scand. 1992; 86:185-188.

52. Raj L, Kulahara P, Avasthi A: Social Burden of positive and negative schizophrenia: Int J Soc Psychiatry. 1991; 37: 242-250.

53. Mueser KT, Webb C, Pteiffer M, Gladis M, Levinson DF: Family burden of schizophrenia and bipolar disorder: perceptions of relatives and professionals: Psychiatr Serv. 1996; 47:507-511.

54. Andren, S., & Elmstahl, S: Relationship between income, subjective health, and caregiver burden in caregivers of people with dementia in group living care: A cross sectional community –based study: International Journal of Nursing studies 2007; 44: 435-446.

55. Chii, J. C., Hsing-Yi, C., Pin, C., & Hsiu, H. W: Social support and caregiving circumstances as predictors of caregiver burden in Taiwan: Archives of Gerontology and Geriatrics. 2009;48:416-424.

56. Juvang, L., Lambert C. E., & Lambert, V. A : Predictors of family caregivers burden and quality of life when providing care for a family member with schizophrenia in the people's re Lambert C. E., & Lambert, V. A : Predictors of family caregivers burden

and quality of life when providing care for a family member with schizophrenia in the people's republic of China. Nursing and Health Sciences 2007;9:192-198.

57. Fujino N and Okamura H: Factors affecting the sense of burden felt by family member caring for patients with mental illness: Archives of psychiatric Nursing. 2009; 23:128-122.

58. Kumari S, Sing AR, Verma AN, Verma PK, Chaudhury S: Subjective burden on spouses of schizophrenia patients: Ind. Psychiatry J. 2009; 18:97-100.

59. Talwar P, Matheiken ST: Caregivers in Schizophrenia: A cross cultural Perspective: Indian J. Psychol. Med. 2010; 32(1):29-33.

60. Aschbrenner AK, Greenberg JS, Seltzer MM:Parenting an adult child with bipolar disorder in later life. J. Nerv. Ment. Dis. 2009; 197:298-304.

61. Davenport L: Patient depression predicts bipolar disorder caregiver burden: Acta Psychiatr Scand. 2008;118:49-56.

62. Ogilive AD, Morant N, Goodwin GM: The burden of informal caregivers of people with bipolar disorder: Bipolar Disord. 2005; 7:25-32.

63. Ostacher MJ, Nierenberg AA, Isoifescu DV, Eidelman P, Lund HG: Correlates of subjective and objective burden among caregivers of patients with bipolar disorder: Acta Psychiatr Scand. 2008; 118(1):49-56.

64. Zergaw A, Hailemariam D, Alem A, Kebede D: A longitudinal comparative analysis of economic and family caregiver burden due to bipolar disorder: Bipolar Disord 2008; 11(3):191-198.

65. Vohra AK, Garg S, Gaur DR: A study of burden on families of schizophrenia and depressive disorders: Indian J Psychiatry 2000; 42:33.

66. Pariante CM, Carpiniello B: Family burden in relatives of schizophrenia and of people with mental retardation: A comparative study: Euro Psychiatry. 1996; 11(8)381-385.

67. Kalra H, Nischal A, Trivedi JK, Dalal Pk: Extent and determinants of burden of care in Indian families: a comparison between obsessive compulsive disorder and schizophrenia: Int J Soc Psychiatry. 2009 Jan; 55(1):28-38.

68. Targum SD, Dibble ED, Davenport YB, Gershon E.S. The Family Attitudes Questionnaire Patients' and Spouses Views of Bipolar Illness. Arch Gen Psychiatry 1981;38:562-568.

69. Hirchfed R, Lewis L, Vornik L.A. Perception and Impact of bipolar disorders how far have we really come? Results of the National Depressive and Mani-Depressive association 2000 survey of Individuals with bipolar disorder. J Clin Psychiatry 2003; 64:161-174.

70. Tsuang MT, Woolson RF, Fleming JA, Long-term outcome of major psychoses, I: Schizophrenia and affective disorders compared with psychiatrically symptom-free surgical conditions. Arch Gen Psychiatry 1979; 39:1295-1301.

71. Thomas JK, Kumar PNS, Verma AN, Sinha VK, Andrade C: Psychosocial Dysfunction and Family Burden in Schizophrenia and Obsessive Compulsive Disorder: Indian J Psychiatry. 2004; 46(3): 238-243.

72. World Health Organization: Report of WHOQOL Focus Group Work: WHO; 1993.

73. Goldberg JF, Harrow M, Grossman LS., Course And Outcome in Bipolar Affective Disorder: A longitudinal follow-up study. Am J Psychiatry 1995; 152:379-384.

74. Room R. Alcohol as a cause: empirical links and social definitions, in: Currents in Alcohol Research and the Prevention of Alcohol problems. Editors-Von Wartburg JP, Manenat P, Muller, Wyss S. Currents in Alcohol Research and the Prevention of Alcohol problems, Berne, Stuttgart, Toronto, Hans Huber. 1985; p. 11-19.

75. Kosten T, Rounsaville B, Bapor T, Spitzer R, Williams J. Substance-use for disorder in DSM-III-R. Br J Psychiatry 1987;151: p.843.

76. Hasin DS, Grant BF, Endicott J. Severity of alcohol dependence and social/occupational problems: relationship to clinical and familial history, Alcoholism: Clinical and Experimental Research 1988;12:660-664.

77. Cherpitel CJ. The epidemiology of alcohol-related trauma. Alcohol Health and Research World 1992; 16:191-196.

78. Velleman R, Bennett G, Miller T, Orford J, Rigby K, Tod A. The families of problem drug users: a study of 50 close relatives. Addiction 1993;22:1281-1289.

79. Room R, Bondy SJ, Ferris J. The risk of harm to oneself from drinking, Canada 1989. Addiction 1995; 90:499-513.

80. Tempier R, Boyer R, Lambert J, Mosier K, Duncan Cr. Psychological distress among female spouses of male at risk drinkers. *Alcohol* 2006; 40(1):41-49.

81. Hinkin CH, Kahn MW. Psychological symptolatology in spouses and adult children of alcoholics: An examination of hypothesized personality characteristics of co-dependency. *The Inteventional Journal of Addiction* 1995;30(7):843-861.

82. Nagalakshmi SV, Suman LN. Family interaction patterns in alcoholic families *NIMHANS Journal* 1995; 13:14-52.

83. Brennan, Penny L, Moos, Rudolf H, Kelly, Krishna M. Spouses of late life problem drinkers: Functioning, coping responses and family contest. *Journal of Family Psychology* 1994;8(4):447-457.

84. Manohar PS, Kannappan R. Domestic violence and suicidal risk in wives of alcoholics and non-alcoholics. *Journal of the Indian Academy of Applied Psychology* 2013;36(2):334-338.

85. Madhabika B Nayak, Patel V, Bond JC, Greenfield TK. Partner alcohol use, violence and Women's mental health: Population-based study in India. *Br J Psychiatry* 2010; 190(3):192-197.

86. Mernov AV, Shustov DI. Suicidal and personality characteristics of women married to men with alcohol dependence and suicidal activity. *Zh Nevrol Psikhiatr Im S S Korasakova* 2011;111(11 Pt 2): 58-60.

87. Kachadourian LK, Taft CT, O'Farrel TJ, Doron-Lamarca S, Murphy CM. Correlates of intimate partner psychological aggression perpetration in a clinical sample of alcoholic men. *J Fam Psychol* 2012;26(2):204-14.

88. Dasgupta A, Battala M, Saggurti N, Nair S, Naik DD, Silverman JG, Balaiah D, Raj A. Local social support mitigates depression among women contending with spousal violence and husband's risky drinking in Mumbai slum communities. *J Affect Disord* 2012;6.

89. Selwyn Stanley. Communication apprehension and danger assessment in wives of alcoholics and non alcoholics. *International Journal of Social Sciences and Hummanity* 2012;2(4).

90. Prado Jde A, Kerr-Correa F, Lima MC, Silva GG, Santos JL. Relations between Depression, Alcohol and Gender in the Metropolitan Region of Sao Paulo, Brazil. *Cien Saude Colet* 2012;17(9):2425-34

91. Tran TD, Tran T, Wynter K, Fisher J. Interactions among alcohol dependence, perinatal common mental disorders and violence in couples in rural Vietnam: a cross-sectional study using structural equation modelling. *BMC Psychiatry* 2012;19;12(1):148.

92. Elissa S. Epel et al. "Premature ageing and stress". From the Proceedings of the National Academy of Sciences, Dec 2004: vol. 101, No.49.

93. Miklowitz DJ. Bipolar disorder: A family—Focused Treatment Approach 2nd New York: The Guilford press; 2008.

94. Post RM, Rubinow PR, Uhde TW et al. Dysphoric mania. Clinical and biological correlates. Arch Gen Psychiatry 1989; 46:353-358.

95. Glaser JK, Glaser R. Chronic stress and age-related increases in the proinflammatory cytokine IL-6. In: Proceedings of the National Academy of Sciences, June 2003.

96. Nicholas D. Christakis and Suzanne Salamon. “Carer’s mortality in stressful events”. New England Journal of Medicine, 2006.

97. Zarit S. Assessment of Family caregiver: A Research Perspective. 2006.

98. Johkeefe, S. Lopez, D.Tiznado, C. Medina, and E. Mendoza: Towards a dyadic view of expressed emotion, In: Caregiving the chronically ill. Arch Gen Psychiatry 1999; 70:363-377.

99. Folkman S, Lazarus RS, Coping as a mediator of emotion J Pers Soc. Psychol. 1988 Mar; 54(3): 466-75.

100. Debahra A Perlick, David J Miklowitz, Nomia Lopez et al. Family –founded treatment for caregivers of patients with bipolar disorder. Bipolar Disord. Sep. 2010;12(6):627-637.

101. Maurizio Pompili et al. Impact of living with bipolar patients: Making sense of Caregivers’ burden. World J. Psychiatry. Mar. 2014; 4(1): 1-12.

102. Burton LC, Newson JT, Schulz R, Hirsch CH, German PS. Preventive health behaviours among spousal caregivers. Prev. Med. 1997, Mar-Apr; 26(2):162-9.

103. Sherman M. The Support and Family Education (SAFE) Program: Mental health facts for families. Psychiatr. Serv. 2003; 54:35-37.

104. Dixon L, Stewart B et al. Pilot study of the effectiveness of Family-to-Family Education Program. Psychiatr. Serv. 2008; 52:965-967.

105. Chaudhuri RJ, Mondal D et al. Family burden among long-term psychiatric patients: Indian J Psychiatry. 1995;37(2);81-85.

106. Alexander L.Miller et al. Texas Medication Algorithm Project (TMAP). Schizophrenia Bulletin, 30 (3): 627-647, 2004.

107. Lam D, Donaldson C, Brown Y, Malliaris Y. Burden and marital and sexual satisfaction in the partners of bipolar patients. Bipolar Disord. 2005;7:431–440.

108. 2233 Veltman A, Cameron J, Stewart DE. The experience of providing care to relatives with chronic mental illness. J Nerv Ment Dis.2002;190:108–114.

109. Goldstein T, Miklowitz DJ, Richards JA. Expressed emotion attitudes and individual psychopathology among the relatives of bipolar patients. Fam Proc. 2002; 41:645-657.

110. M, Colom F, Sanchez-Moreno J, et al. Impact of caregiver group psycho education on the course and outcome of bipolar patients in remission: a randomized controlled trial. Bipolar Disorder. 2008;10:511-519.

111. Goldberg D, William P. A user's guide to General Health questionnaire(GHQ). Windsor, Berkshire. NFER-NELSON Pub CO. Ltd. England. 1988

112. World Health Organization. The ICD -10 Classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines. Geneva: World Health Organization; 1992.

113. Brown GW, Birley LT, Wing JK. Influence of family life on the course of schizophrenia disorder: a replication. BR. J. Psychiatry. 1972;121:24-258.

114. Sheehan DV, Lecrubien Y. English version 5.00 Tampa: University of South Florida; 1998. M.I.N.I Plus. Mini International Neuropsychiatric Interview.

115. Miller F et al. A preliminarystudy of unresolved griefin families of seriously mentally ill patients. Hosp Community Psy 1990;12:1321-25.

116. Anand Mathur, DK Sharma, Ashok Choudhary, Mahendra Jain. Efficacy and safety of citalopram versus amitriptyline in the treatment of major depression Indian Journal of Psychiatry, Year 2005, Volume 47, Issue 2 [p. 89-93]

117. A study on patient satisfaction with psychiatric services Prabhakar C Holikatti, Nilamadhab Kar, Ajaya Mishra, Rajnikant Shukla, Sarada P Swain, Samrat Kar Indian Journal of Psychiatry, Year 2012, Volume 54, Issue 4 [p. 327-332].

118. Positive antidepressant effects of generic yoga in depressive out-patients: A comparative study BN Gangadhar, GH Naveen, MG Rao, J Thirthalli, S Varambally Indian Journal of Psychiatry, Year 2013, Volume 55, Issue 7 [p. 369-373].

119. A 6-week, multicentre, randomized controlled clinical trial to evaluate the safety and efficacy of placeboxetine hydrochloride in the treatment of major depressive disorder in an Indian setting Chittaranjan Andrade. Indian Journal of Psychiatry, Year 2011, Volume 53, Issue 1 [p. 69-72).

120. Green, MF. What are the functional consequences of neurocognitive deficits in schizophrenia? American J of Psychiatry, 153(3): 321-330, 1996

121. Siris, S.G. Depression in Schizophrenia: Perspective in the era of "atypical" antipsychotic agents American J of Psychiatry, 157:1379-1389, 2000

122. Velligan, DI; Mahurin RK, Diamend PL, Hazleton BC, Eckert SL, Miller AL. The functional significance of symptomatology and cognitive function in schizophrenia. Schizophrenia Research, 25:21, 1997.

123. GC Pluck, RG Brown. Apathy in Parkinson's disease. J Neurol Nerosurg psychiatry 2002;73:636-642.

124. Marsh NV, Kersel DA. Caregiver burden at 1year following severe traumatic brain injury. Brain injury 1998;12:1045-59.

125. Aarsland D, Cummings JL. Neuropsychiatric differences between Parkinson's disease with dementia and Alzheimer's disease. Intl J Geriatric Psychiatry 2001;16:184-191.

126. Starkstein SE, Mayberg SE. bReliability, validity, and clinical correlates of apathy in Parkinson's disease. J Neuropsychiatry 1992;4:134-9.

127. Chadda RK, Singh TB, Ganguly KK. A prospective study of relationship of caregivers' mental health with the perceived burden and coping in schizophrenia and bipolar affective disorder. Indian J Soc Psychiatry 2010;25:45‑51.

128. Chadda RK, Singh TB, Ganguly KK. Caregiver burden and coping: A prospective study of relationship between burden and coping in caregivers of patients with schizophrenia and bipolar affective disorder. Soc Psychiatry Psychiatr Epidemiol 2007;42:923‑30.

129. Davidson, R & Raistrick, D. The validity of the Short Alcohol Dependence Data (SADD) Questionnaire: A short self-report questionnaire for the assessment of alcohol dependence. British Journal of Addiction 1986;81:217-222.

130. Singh G, Kaur D, Kaur H (1984). Presumptive stressful life events scale (psles) –a new stressful life events scale for use in India. Indian J Psychiatry 26:107-114.

131. Sheeham DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J et al. (1998). The MINI-International Neuropsychiatric Interview (M.I.N.I.): The development and validation of a structured diagnostic interview for DSM-IV and ICD-10. I Clin Psychiatry 59:22-33.

132. Azorin JM, Spiegel R, Remington, et al. A double-blind comparative study of clozapine and risperidone in the management of severe chronic schizophrenia. Am J Psychiatry 2001;158:1305-13.

133. Solanki RK, Singh P, Swami MK. clozapine: current perspective. Indian J Psychiatry 2007;49:271-6.

134. Haro JM, et al. Assessment of remission in schizophrenia with the CGI and CGI-SCH scales.Acta Psychiatr Scand. 200;115(2):163-4.

135. Haro JM, Kamath SA, The Clinical Global Impression–Schizophrenia scale: a simple instrument to measure the diversity of symptoms present in schizophrenia Acta Psychiatr Scand 2003: 107 (Suppl. 416): 16–23

136. Robert PH, Clairet S, Benoit M, Koutaich J, Bertogliati C, Tible O, Caci H, Borg M, Brocker P, Bedoucha P. The Apathy Inventory: assessment of apathy and awareness in Alzheimer's disease Parkinson's disease and Mild cognitive impairment. International Journal of Geriatric Psychiatry, 17: 1099 – 1105, 2002.

137. Mohammed Elmahdi Foad Kamel Ali Esmael Burden of care on female caregivers and its relation to psychiatric morbidity Middle East Current Psychiatry 03/2011; 18(2):65–71.

138. Naga Venkatesha PJ et al. Alcohol dependence in Indian women: A clinical perspective.NIMHANS,2006.
nimhans.kar.nic.in/deaddiction/lit/alcohol_dependence_in_indian_women. pdf.

139. Rosovsky H al. Al-anon groups in Mexico. Contemporary dru problems 1992;19:587-603

140. Perlick D, Dawson DD et al. The impact of partner alcohol problemson women's physical and mental health. J Stud Alcohol Drugs 2007;68(1):66-75.

141. Spearing MK, Post RM, Leverich GS, Brandt D, Nolen W. Modification of the Clinical Global Impressions (CGI) Scale for use in bipolar illness (BP): the CGI-BP. Psychiatry Res 1997; 73(3):159–71.

142. Guy, W. (1976). The Clinical Global Impression Scale. In: ECDEU Assessment Manual for Psychopharmacology-Revised. Rockville, MD: US Dept. of Health, Education and Welfare, ADAMHA, MIMH Psychopharmacology Research Branch, pp 218-222.

143. Lashmi N Yatham, Mario aj. Bipolar disorder. Clinical and Neurobiological foundations. John Wiley & Sons. 28-Jun 2011.

144. Jones SL et al. Effect of demographic and behavioural variables on burden of caregivers of chronic mentally ill persons: Psychiatr Serv 1995;46:141-5.

145. Wang P, Kessler RC. Global burden of mood disorders. Text book of mood disorder. 2006, p55-67.

146. Chun FC et al. Factors associated with careburden and quality of life among caregivers in Chinese society. Intl J Soc Psychiatry. 2009;55:115-120.

147. WHO. Global Disease Burden report. 2010. Geneva.

ANNEXURE 1

SOCIODEMOGRAPHIC DATA

Patient code no.	:	
Age	:	
Religion	:	Hindu Muslim Christianity Others
Education	:	Illiterate -less than 5th class/5th to 8th class /9th to 12th class/Undergraduate/ Postgraduate or Professional
Marriage duration	:	
Family type	:	Nuclear Extended nuclear Joint
Number of Children	:	<15 years: >15 years:
Occupation	:	Unemployed Unskilled Semiskilled Skilled Professional
Annual family Income	:	
Locality	:	Urban/Rural
Patient's Occupation Status	:	A. Currently Unemployed : For <1year/ 1-5 years / 5-10 years/>10 years B. Net Unemployed duration in past 10 years <1yr/1-5yrs/5-10yrs/>10yrs

Patient's Net Contribution To family Income :

	<10%	11-25%	26-50%	51-75%	>75%
Past 1 Year					
Most Part Of Past 5 Years					

Spouse Age :

Education :

Occupation : Unemployed Unskilled Semiskilled Skilled Professional

Spouse's Net Contribution To family Income : <10% 11-25% 26-50% 51-75% >75%

Past 1 Year

Most Part Of Past 5 Years

CLINICAL PROFILE :

Duration of illness in patient : 10-13yrs/14-17yrs/18-21yrs/>21yrs

Duration of current complications/episodes: <1wk/1-2wk/2-4wk/4-8wk />8wk

Net duration of abstinence/symptomfree period past 5yrs:<1yr/1-2yrs/2-3yrs/3-4yrs/>4yrs

Current alcohol complication /bipolar episode :

Frequency of general medical/psych admissions in 10years:

Frequency of ICU admissions in past 10yrs :

Time since last admission :

(a)Age Of Onset Of Drinking: :

Duration Of Drinking :

Age Of Onset Of Dependence :

Amount Of Alcohol Consuming :

Nature Of Alcohol :

Other Substance :

Family History Of Alcohol Dependence :

Psychiatric Complications : Yes/No

Types Of Psychiatric Comorbidities In Alcohol Dependence

1. Delirium
2. Psychosis
3. Seizures
4. Mood Disorder

5. Amnesic Disorder
6. Only withdrawal symptoms/nil complication

(a)Duration Since Onset Of Alcohol Dependence :

(b)Duration Since Diagnosis Of Schizophrenia :

(c)Duration Since Diagnosis Of Bipolar Affective Disorder :

Current episode :

Number Of Episodes In Patients With Bipolar Affective Disorder(in 10yrs) :

Number Of Suicidal Attempts : 1 2 3 4 5 >5

Number Of Hospital Inpatient Admissions/Psychiatry Ward:

1 2 3 4 5 >5

Number Of Hospital ICU Admissions : 1 2 3 4 5 >5

Physical Illness In Patient :Diabetes/ Hypertension/BA/IHD/Thyroid dis./Seizure dis./Others - :

Physical Illness In Spouse :Diabetes/ Hypertension/ BA/IHD/Thyroid dis./Seizure dis./Others -

Annexure 2
The Short Alcohol Dependence Data Questionnaire

Instructions:
The following questions cover a wide range of topics having to do with drinking. Please read each question carefully, but do not think too much about its exact meaning. Think about your most recent drinking habits and answer each question by using the criteria listed below. Use a sheet of paper and write numbers from 1through 15 and write your answer next to the number of the question.

1. Do you find difficulty in getting the thought of drinking out of your mind?
Never Sometimes Often Nearly Always

2. Is getting drunk more important than your next meal?
Never Sometimes Often Nearly Always

3. Do you plan your day around when and where you can drink?
Never Sometimes Often Nearly Always

4. Do you drink in the morning, afternoon, and evening?
Never Sometimes Often Nearly Always

5. Do you drink for the effect of alcohol without caring what the drink is?
Never Sometimes Often Nearly Always

6. Do you drink as much as you want irrespective of what you are doing the next day?
Never Sometimes Often Nearly Always

7. Given that many problems might be caused by alcohol, do you still drink too much?
Never Sometimes Often Nearly Always

8. Do you know that you won't be able to stop drinking once you start?
Never Sometimes Often Nearly Always

9. Do you try to control your drinking by giving it up completely for days or weeks at a time?
Never Sometimes Often Nearly Always

10. The morning after a heavy drinking session do you need your first drink to get yourself going?
Never Sometimes Often Nearly Always

11. The morning after a heavy drinking session do you wake up with a definite shakiness of your hands?
Never Sometimes Often Nearly Always

12. After a heavy drinking session do you wake up and retch or vomit?
Never Sometimes Often Nearly Always

13. The morning after a heavy drinking session do you go out of your way to avoid people?
Never Sometimes Often Nearly Always

14. After a heavy drinking session do you see frightening things that later you realize were imaginary?
Never Sometimes Often Nearly Always

15. Do you go drinking and the next day and find that you have forgotten what happened the night before?
Never Sometimes Often Nearly Always

Scoring: "never": 0points; "sometimes": 1point; "often": 2points; "nearly always": 3points; 1-9: low dependence; 10-19: medium dependence; 20 (or greater): high dependence.

ANNEXURE 3

CGI-SCH: CLINICAL GLOBAL IMPRESSION SCALE - SCHIZOPHRENIA VERSION

1.Developed by:

Josep Maria Haro[1], Diego Novick[2], Susana Ochoa[1], Padraig Wright[2], Venetsanos Mavreas[3], Peter Jones[4]

[1] Sant Joan de Déu-Serveis de Salut Mental, Sant Boi de L, Barcelona, Spain

[2] Eli Lilly and Co, Erl Wood, UK [3] University of Ioannina, Greece [4] University of Cambridge, UK

Reference: Haro JM, Kamath SA, Ochoa S, Novick D, Rele K, Fargas A, Rodriguez MJ, Rele R, Orta J, Kharbeng A, Araya S, Gervin M, Alonso J, Mavreas V, Lavrentzou E, Liontos N, Gregor K, Jones PB. The Clinical Global Impression-Schizophrenia scale: a simple instrument to measure the diversity of symptoms present in schizophrenia. Acta Psychiatr Scand Suppl. 2003(416):16-23.

2. Dimension: Contents

POSITIVE SYMPTOMS	Represent an abnormal mental functioning (e.g. hallucinations, delusions, bizarre behaviour, grandiosity)
NEGATIVE SYMPTOMS	Represent a deficit of a mental function that is normally present (e.g. affective flattening, avolition, anhedonia, emotional withdrawal, poor rapport)
DEPRESSIVE SYMPTOMS	Sadness, depressed mood or hopelessness
COGNITIVE SYMPTOMS	Impaired attention, concentration or memory, conceptual disorganization, difficulty in abstract thinking
OVERALL SEVERITY	Consider severity of symptoms and interference with functioning

3. ANCHOR POINTS

Severity of illness

1	**Normal, not ill**	Normal, not at all ill.

2	**Minimally ill**	Few or mild symptoms of illness with effective functioning or very little interference in patient's usual and occupational roles
3	**Mildly ill**	Low levels of illness symptoms with little impairment in patient's usual social and occupational roles
4	**Moderately ill**	Some prominent symptoms with some interference in the level of daily functioning
5	**Markedly ill**	Significant illness symptoms with very substantial interference in the patient usual roles
6	**Severely ill**	Very marked illness symptoms. Patient is unable to function in most areas of daily activities
7	**Among the most severely ill**	Extreme illness symptoms. Patient is completely incapacitated and requires extra care and supervision

Clinical Global Impression Scale - Schizophrenia Version (CGI-SCH)

I. **Severity of illness**

Considering your total clinical experience with patients with schizophrenia,

how severely ill has the patient been during the last week?

		Normal/not ill	Minimally ill	Mildly ill	Moderately ill	Markedly ill	Severely ill	Among the most severely ill
1	Positive symptoms (e.g. hallucinations, delusions or bizarre behaviour)	1	2	3	4	5	6	7
2	Negative symptoms (e.g. affective flattening, avolition or anhedonia)	1	2	3	4	5	6	7
3	Depressive symptoms (e.g. sadness, depressed mood or hopelessnes)	1	2	3	4	5	6	7
4	Cognitive symptoms (e.g. impaired attention, concentration or memory)	1	2	3	4	5	6	7
5	Overall severity	1	2	3	4	5	6	7

ANNEXURE 4

CLINICAL GLOBAL IMPRESSION – BIPOLAR PATIENTS VERSION CGI—BP

Spearing MK, Post RM, Leverich GS, Brandt D, Nolen W. Modification of the Clinical Global Impression (CGI) scale for use in bipolar illness: the CGI-BP. *Psychiatry Res* 1997;73:159–171.

SEVERITY OF ILLNESS

Considering your total clinical experience with this particular population how mentally ill is this patient at this time?

- ☐ Not Assessed
- ☐ Normal, not at all ill
- ☐ Borderline
- ☐ Mildly ill
- ☐ Moderately ill
- ☐ Markedly ill
- ☐ Severely ill
- ☐ Among the most extremely ill

CGI-BP-S Scoring guidelines
1 = Normal- not at all ill, symptoms of disorder not present past seven days
2 = Borderline mentally ill – subtle or suspected pathology
3 = Mildly ill – clearly established symptoms with minimal, if any, distress or difficulty in social and occupational function.
4 = Moderately ill – overt symptoms that cause noticeable, but modest, functional impairment or distress, symptom level may warrant medication
5 = Markedly ill – intrusive symptoms that distinctly impair social/occupational function or cause intrusive levels of distress.
6 = Severely ill – disruptive pathology, behavior and function are frequently influenced by symptoms, may require assistance from others
7 = Among the most extremely ill patients – pathology drastically interferes in my life functions; may be hospitalized
Adapted from Kay SR, (1991). Positive and Negative symptoms in Schizophrenia. Assessment and Research. *Clin Exp Psychiatry* Monograph No.5 Brunner/Mazel

I. **Severity of illness**

Considering your total clinical experience with patients with schizophrenia,

how severely ill has the patient been during the last week?

		Normal /not ill	Minimally ill	Mildly ill	Moderately ill	Markedly ill	Severely ill	Among the most severely ill
1	MANIA	1	2	3	4	5	6	7
2	DEPRESSION	1	2	3	4	5	6	7
3	OVERALL BIPOLAR ILLNESS	1	2	3	4	5	6	7

ANNEXURE 5 APATHY INVENTORY

APATHY INVENTORY - *IA CAREGIVER*

Name: **date :**

Type of evaluation:

First Evaluation

Follow up evaluation: time since the previous evaluation

1 - Emotional blunting **F x S = / 12**

Is he /she is as affectionate and express emotion as usual?

Yes = 0 **No** = *rate frequency and severity*

FREQUENCY

Occasionally: less than once a week	**1**
Often: about once a week	**2**
Frequently: several times a week but less than everyday	**3**
Very frequently: essentially continuously present	**4**

SEVERITY

Mild	**1**
Moderate	**2**
Marked	**3**

2 – Lack of initiative: **F x S = / 12**

Is he /she initiates a conversation and or make decisions?

In daily life, does he/she refer to you when he takes a decision or when he is asked a question ?

Yes = 0 **No** = *rate frequency and severity*

FREQUENCY

Occasionally: less than once a week	**1**
Often: about once a week	**2**
Frequently: several times a week but less than everyday	**3**
Very frequently: essentially continuously present	**4**

SEVERITY

Mild	**1**
Moderate	**2**
Marked	**3**

3 – Lack of interest: **F x S = / 12**

Does he / she:

- Seem interested in the activities and plans of others?
- Interested in friends and family members?
- Enthusiastic about his / her usual leisure or professional interests?

Yes = 0 **No** = *rate frequency and severity*

FREQUENCY

Occasionally: less than once a week	**1**
Often: about once a week	**2**
Frequently: several times a week but less than everyday	**3**
Very frequently: essentially continuously present	**4**

SEVERITY

Mild	**1**
Moderate	**2**
Marked	**3**

TOTAL SCORE: (1+2+3) **/ 36**

APATHY INVENTORY
IA

The principle of the Apathy Inventory (*IA*) is to obtain information on the presence of apathy in patients with brain disorders. The Apathy Inventory is composed of 3 versions:
Caregiver version
Patient version
Clinician version
Each version assess the 3 same clinical dimensions:
- Emotional blunting
- Lack of initiative
- Lack of interest

General principle

At the time of the first assessment questions deal with behavior changes having appeared since the beginning of the disease. Behavior traits found throughout the life of the patient and not having changed since the evolution of the disease are not taken into account, even if they were abnormal.
It is also possible to use the IA **to measure changes occurred in a specific time lapse** (eg. Found during the last four weeks or since the beginning of treatment given by a physician).

Results analysis

In clinical research there is different possible cut off score
In clinical practice the most relevant scores are:
In the caregiver version:
- According to the interview rule, the presence compared to the absence of one of the IA dimension
- According to the quantitative rule a score > 2 in one of the IA dimension
Anosognosia: the caregiver – patients discrepancy IA total score
In the clinical version:
- A score equal or upper to 4 is pathological.

References:

- Robert PH, Clairet S, Benoit M, Koutaich J, Bertogliati C, Tible O, Caci H, Borg M, Brocker P, Bedoucha P. The Apathy Inventory: assessment of apathy and awareness in Alzheimer's disease Parkinson's disease and Mild cognitive impairment. International Journal of Geriatric Psychiatry, 17: 1099 – 1105, 2002
- Benoit M, Clairet S, Koulibaly P.M., Darcourt J, Robert P.H. Brain perfusion correlates of the Apathy Inventory dimensions of Alzheimer's disease. *International Journal of Geriatric Psychiatry*; 19: 864-869, 2004
- Robert,P.H., Berr,C., Volteau,M., Bertogliati,M., Benoit,M., Mahieux,F., Legrain,S.,Dubois,B. Neuropsychological performance in mild cognitive impairment with and without apathy. *Dementia and Geriatric cognitive dis.* 21 : 192-197, 2006

Email: massa.i@chu-nice.fr or robert.ph@chu-nice.fr

It is possible to obtain 4 scores:
- for each of three items, a score of Frequency x Severity (F x S) over 12
- A global score of 36 corresponding to the sum of three previous F x S scores

For an ambulatory patient (outpatient, Day Hospital ambulatory care, medical visit)

Emotional Blunting: Take into account:

- Facial expression and gestures appropriate to conversation

-The capacity of a patient to express an emotional reaction during the course of a humorous conversation, or, on the other hand, during the course of a sad conversation.

- Reaction to presentation of a new medical diagnosis or medical test results

-The capacity of the patient to express an emotional reaction when proposed a reward (for example when such a test is taken during the course of a neuropsychological assessment, a medical visit or in a day hospital)

Loss of initiative: Take into account:

- Spontaneous capacity to speak and to integrate oneself into a conversation, to ask for details.

- The relationship with the caregiver (when a question is posed directly to the patient, does the patient turn their head towards the caregiver, asking for s/he to respond).

- The capacities of initiative of the patient at the moment of entering the doctor's office or at the time of leaving, their response at requests to do things (the fact of doing something only after being stimulated or asked to do so indicating a lack of spontaneity of initiative and should be taken into account in the evaluation).

- Performance on cognitive tests evaluating the capacity for initiative.

Loss of interest: Take into account:

- The level of interest of the subject in the interview: mimicking posture and response, attention and eye contact.

- The quality and quantity of details provided by the patient when asked about their personal interests.

- The number of interests evoked by a test objectively exploring the patient interests.

BURDEN ASSESSMENT SCHEDULE

NAA – Not At All
TSE –To Some Extent
VM – Very Much

Sl. No.	Item * no.	Questions	NAA	TSE	VM
I.		**Spouse related**			
1	17	Does your spouse help with family responsibility?	3	2	1
2	18	Is your spouse able to satisfy your sexual needs?	3	2	1
3	19	Is your spouse affectionate towards you?	3	2	1
4	20	Has the quality of your martial relationship declined since spouse's illness?	1	2	3
5	40	Are you satisfied with the amount of help that you are getting from health professionals regarding your relative's illness?	3	2	1
Sub scale score =					
II.		**Physical and mental health**			
6	21	Does the caring for the patient make you feel easily tired and exhausted?	1	2	3
7	22	Has your workload increased after the patient's illness?	1	2	3
8	23	Do you think your health has been affected because of patient's illness?	1	2	3
9	26	Do you sometimes feel depressed and anxious because of the patient?	1	2	3
10	33	Have you started feeling lonely and isolated since the patient's illness?	1	2	3
11	37	Do you often feel frustrated that the improvement of the patient is slow?	1	2	3
Sub sale score =					
III		**External support**			
12	11	Does the support from your family help in caring for the patient?	3	2	1
13	13	Are you able to care for others in your family?	3	2	1
14	13	Do you think your family appreciates the way you handle the patient?	3	2	1
15	36	Do you think your friend appreciates the way you handle the patient?	3	2	1
16	39	Do you have the feeling that your relative understand and appreciates your effort to him or her?	3	2	1
Sub scale score=					

IV		**Care givers routine**			
17	7	Does the patient's illness affect your efficiency at work (at home/at work place)?	1	2	3
18	8	Are you satisfied with the way the patient look after himself?	3	2	1
19	24	Do you find time to look after your health?	3	2	1
20	25	Are you able to relax for sometime during the day?	3	2	1
21	31	Has your sleep been affected since the patient look ill?	1	2	3
Sub scale score =					
V		**Support of patient**			
22	1	Is the current financial position adequate to look after the patient?	3	2	1
23	1	Has your financial situations worsened since the patient's illness?	1	2	3
24	6	Do you feel forced into going to work to support the patient?	1	2	3
25	29	Does reducing the time spent with the patient (work/order activities) help you?	1	2	3
Sub scale score =					
VI		**Taking responsibility**			
26	2	Are you concerned that you are largely responsible to meet the financial position ?	1	2	3
27	3	Does the patient's financial position worry you ?	1	2	3
28	9	Do you feel you have to take responsibility of ensuring that the patient everything he ness ?	1	2	3
29	13	Does your sharing problems with others feel better ?	3	2	1
Sub scale score =					
VII		**Other relations**			
30	14	Has your family stability disrupted by your relatives illness (frequent queries, breakup) ?	1	2	3
31	16	Does the patient's illness prevent you from having satisfying relationship with the rest of the family ?	1	2	3
32	32	Does your relative's illness prevent you from having satisfying relationship with the friends ?	1	2	3
Sub scale score =					
VIII		**Patient's behavior**			
33	5	Is the patient's illness preventing you from looking for a job?	1	2	3
34	12	Does the patient cause disturbance in the home?	1	2	3
35	27	Do you sometimes feel that there is no solution to your problem?	1	2	3
36	3	Does the patient's unpredictable behavior disturb you?	1	2	3
Sub scale score =					

IX		Caregivers strategy			
37	10	Do you think you have to compensate the patient's shortcoming in general?	1	2	3
38	28	Do you feel sometimes the need for temporary separation from the patient?	1	2	3
39	34	Does the support from the friends help in caring the patient?	1	2	3
40	38	Do you think you are doing more than the patient improve his/her situation is ?	1	2	3
Sub scale score =					

* The numbers are as mentioned in the original article.

WHOQOL-BREF

PROGRAMME ON MENTAL HEALTH
WORLD HEALTH ORGANIZATION
GENEVA

For office use only

	Equations for computing domain scores	Raw score	Transformed scores*	
Domain 1	(6-Q3) + (6-Q4) + Q10 + Q15 + Q16 + Q17 + Q18 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=	4-20	0-100
Domain 2	Q5 + Q6 + Q7 + Q11 + Q19 + (6-Q26) ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=		
Domain 3	Q20 + Q21 + Q22 ☐ + ☐ + ☐	=		
Domain 4	Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25 ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐ + ☐	=		

* Please see Table 4 on page 10 of the manual, for converting raw scores to transformed scores.

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

		Very poor	Poor	Neither poor nor good	Good	Very good
1(G1)	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
2 (G4)	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3 (F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4(F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5(F4.1)	How much do you enjoy life?	1	2	3	4	5
6(F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
7(F5.3)	How well are you able to concentrate?	1	2	3	4	5
8 (F16.1)	How safe do you feel in your daily life?	1	2	3	4	5
9 (F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks.

		Not at all	A little	Moderately	Mostly	Completely
10 (F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
11 (F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
12 (F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
13 (F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14 (F21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	Poor	Neither	Good	Very good

				poor nor good		
15 (F9.1)	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how **good or satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied
16 (F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
17 (F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18(F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
19 (F6.3)	How satisfied are you with yourself?	1	2	3	4	5
20(F13.3)	How satisfied are you with your personal relationships?	1	2	3	4	5
21(F15.3)	How satisfied are you with your sex life?	1	2	3	4	5
22(F14.4)	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23(F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5
24(F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
25(F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
26 (F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this form?.....

How long did it take to fill this form out?.....

Do you have any comments about the assessment?

.....

.....

THANK YOU FOR YOUR HELP

APPENDIX 9

GHQ12

Have you recently ?

1. **Been able to concentrate on whatever you are doing**
2. **Lost much sleep over worry**
3. **Felt that you are playing a useful part in things**
4. **Felt capable of making decisions about things**
5. **Felt constantly under strain**
6. **Felt you couldn't overcome your difficulties**
7. **Been able to enjoy your normal day to day activities**
8. **Been able to face up to your problems**
9. **Been feeling unhappy and depressed**
10. **Been losing confidence in yourself**
11. **Been thinking of yourself as a worthless person**
12. **Been feeling reasonably happy, all things**

TOTAL SCORE out of 12: >2 = positive psychopathology

Goldberg, D. & Williams, P. (1988) *A users guide to the General Health Questionnaire*. Slough: NFER-Nelson

A. MAJOR DEPRESSIVE EPISODE

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

FOR PATIENTS WHO APPEAR PSYCHOTIC BEFORE STARTING THE INTERVIEW, OR WHO ARE SUSPECTED TO HAVE SCHIZOPHRENIA, PLEASE ADOPT THE FOLLOWING ORDER OF ADMINISTRATION OF MODULES:

1) PART 1 OF MODULE M (PSYCHOTIC DISORDERS M1-M18).
2) SECTIONS A-D (DEPRESSION TO (HYPO)MANIC EPISODE).
3) PART 2 OF MODULE M (PSYCHOTIC DISORDERS M19-M23).
4) OTHER MODULES IN THEIR USUAL SEQUENCE.

IF MODULE M HAS ALREADY BEEN EXPLORED AND PSYCHOTIC SYMPTOMS HAVE BEEN IDENTIFIED (M1 TO M18b), EXAMINE FOR EACH POSITIVE RESPONSE TO THE FOLLOWING QUESTIONS IF THE DEPRESSIVE SYMPTOMS ARE NOT BETTER EXPLAINED BY THE PRESENCE OF A PSYCHOTIC DISORDER AND CODE ACCORDINGLY.

A1	a	Have you ever been consistently depressed or down, most of the day, nearly every day, for at least two weeks?	NO	YES
		IF **A1a = YES:**		
	b	Have you been consistently depressed or down, most of the day, nearly every day, **in the past 2 weeks?**	NO	YES
A2	a	Have you ever been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time over at least 2 weeks?	NO	YES
		IF **A2a = YES:**		
	b	In the past 2 weeks, have you been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time.	NO	YES
		IS A1a OR A2a CODED YES? ➡	NO	YES

IF CURRENTLY DEPRESSED (**A1b** OR **A2b = YES**), EXPLORE THE CURRENT EPISODE AND THE MOST SYMPTOMATIC PAST EPISODE. OTHERWISE EXPLORE THE MOST SYMPTOMATIC PAST EPISODE.

A3 **Over the two week period when you felt depressed or uninterested,**

		Current Episode		Past Episode	
a	Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (I.E., BY 5% OF BODY WEIGHT OR ±5 LBS. OR ±2.5 KGS. FOR A 160-LB./70 KGS. PERSON IN A MONTH)? IF YES TO EITHER, CODE **YES**.	NO	YES	NO	YES
b	Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?	NO	YES	NO	YES
c	Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	NO	YES	NO	YES
d	Did you feel tired or without energy almost every day?	NO	YES	NO	YES
e	Did you feel worthless or guilty almost every day?	NO	YES	NO	YES

IF **A3e = YES:** ASK FOR AN EXAMPLE.
THE EXAMPLE IS CONSISTENT WITH A DELUSIONAL IDEA. ☐ NO ☐ YES

f	Did you have difficulty concentrating or making decisions almost every day?	NO	YES	NO	YES
g	Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?	NO	YES	NO	YES
A4	ARE 3 OR MORE A3 ANSWERS CODED YES (OR 4 A3 ANSWERS, IF A1a OR A2a ARE CODED NO FOR PAST EPISODE OR IF A1b OR A2b ARE CODED NO FOR CURRENT EPISODE)?	NO	YES	NO	YES

VERIFY IF THE POSITIVE SYMPTOMS OCCURRED DURING THE SAME 2 WEEK TIME FRAME.

IF A4 IS CODED NO FOR CURRENT EPISODE THEN EXPLORE A3a - A3g FOR MOST SYMPTOMATIC PAST EPISODE.

➡

A5 Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way? NO YES

A6 Are the symptoms due entirely to the loss of a loved one (bereavement) and are they similar in severity, level of impairment, and duration to what most others would suffer under similar circumstances? If so, this is uncomplicated bereavement.

HAS UNCOMPLICATED BEREAVEMENT BEEN RULED OUT? NO YES

A7 a Were you taking any drugs or medicines just before these symptoms began?
☐ No ☐ Yes

b Did you have any medical illness just before these symptoms began?
☐ No ☐ Yes

IN THE CLINICIAN'S JUDGMENT: ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S DEPRESSION? IF NECESSARY ASK ADDITIONAL OPEN-ENDED QUESTIONS.

A7 (SUMMARY): HAS AN ORGANIC CAUSE BEEN RULED OUT? NO YES UNCERTAIN

A8 CODE **YES** IF **A7(SUMMARY)** = **YES OR UNCERTAIN.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

NO	YES
Major Depressive Episode	
Current	☐
Past	☐

A9 CODE **YES** IF **A7b** = **YES** AND **A7 (SUMMARY)** = **NO.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

NO	YES
Mood Disorder Due to a General Medical Condition	
Current	☐
Past	☐

A10 CODE **YES** IF **A7a** = **YES** AND **A7 (SUMMARY)** = **NO.**

SPECIFY IF THE EPISODE IS CURRENT AND/ OR PAST OR BOTH (RECURRENT).

NO	YES
Substance Induced Mood Disorder	
Current	☐
Past	☐

SUBTYPES OF MAJOR DEPRESSIVE EPISODE	Mark all that apply.
Mild	❑ 296.21/296.31
Moderate	❑ 296.22/296.32
Severe without psychotic features	❑ 296.23
Severe with psychotic features	❑ 296.24
In partial remission	❑ 296.25
In full remission	❑ 296.26
Chronic	❑
With catatonic features	❑
With melancholic features	❑
With atypical features	❑
With postpartum onset	❑
With seasonal pattern	❑
With full interepisode recovery	❑
Without full interepisode recovery	❑

IF **A8** OR **A9** OR **A10** = **YES**, SKIP TO SUICIDALITY ➡

B. DYSTHYMIA

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE **NO**, AND MOVE TO THE NEXT MODULE)

If patient's symptoms <u>currently</u> meet criteria for major depressive episode, do NOT explore <u>current</u> dysthymia, but do explore PAST dysthymia. Make sure that the past dysthymia explored is not one of the past major depressive episodes, and that it was separated from any prior major depressive episode by at least 2 months of full remission. [APPLY THIS RULE ONLY IF YOU ARE INTERESTED IN EXPLORING DOUBLE DEPRESSION.]

SPECIFY WHICH TIME FRAME IS EXPLORED BELOW: ❑ Current ❑ Past

B1	Have you felt sad, low or depressed most of the time for the last two years? (OR IF EXPLORING PAST DYSTHYMIA: "In the past, did you ever feel sad, low or depressed for 2 years continuously?")	➡ NO	YES
B2	Was this period interrupted by your feeling OK for two months or more?	NO	➡ YES
B3	**During this period of feeling depressed most of the time:**		
a	Did your appetite change significantly?	NO	YES
b	Did you have trouble sleeping or sleep excessively?	NO	YES
c	Did you feel tired or without energy?	NO	YES
d	Did you lose your self-confidence?	NO	YES
e	Did you have trouble concentrating or making decisions?	NO	YES
f	Did you feel hopeless?	NO	YES
	ARE **2** OR MORE **B3** ANSWERS CODED **YES**?	➡ NO	YES
B4	Did the symptoms of depression cause you significant distress or impair your ability to function at work, socially, or in some other important way?	➡ NO	YES

B5 Were you taking any drugs or medicines just before these symptoms began?
Did you have any medical illness just before these symptoms began?
IN THE CLINICIAN'S JUDGMENT, ARE EITHER OF THESE LIKELY TO BE DIRECT CAUSES OF THE PATIENT'S DEPRESSION?

HAS AN ORGANIC CAUSE BEEN RULED OUT? NO YES

IS **B5** CODED YES?

NO	YES
DYSTHYMIA	
Current	❑
Past	❑

CHRONOLOGY

B6 How old were you when you first began having symptoms of 2 years of continuous depression? ☐ age

	j	Are you not achieving according to people's expectations of your ability?	NO	YES
	k	Have you changed jobs or have been asked to leave jobs more frequently than other people?	NO	YES
	l	Does your spouse complain about your inattentiveness or lack of interest in him/her and/or the family?	NO	YES
	m	Have you gone through two or more divorces, or changed partners more than others?	NO	YES
	n	Do you sometimes feel like you are in a fog, like a snowy television or out of focus?	NO	YES
		W7 (SUMMARY): ARE **9** OR MORE **W7** ANSWERS CODED **YES**?	NO	YES
W8		Have some of these symptoms caused significant problems in two or more of the following situations: at school, at work, at home, or with family or friends?	NO	YES

IS **W8** CODED **YES?**

NO	YES
	Adult Attention Deficit/Hyperactivity Disorder

X. ADJUSTMENT DISORDERS

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

EVEN IF A LIFE STRESS IS PRESENT OR A STRESS PRECIPITATED THE PATIENT'S DISORDER, DO NOT USE AN ADJUSTMENT DISORDER DIAGNOSIS IF ANY OTHER PSYCHIATRIC DISORDER IS PRESENT. SKIP THE ADJUSTMENT DISORDER SECTION IF THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOTHER SPECIFIC AXIS I DISORDER OR ARE MERELY AN EXACERBATION OF A PREEXISTING AXIS I OR II DISORDER.

ONLY ASK THESE QUESTIONS IF PATIENT CODES NO TO ALL OTHER DISORDERS.

X1		Are you having emotional or behavioral symptoms as a result of a life of stress? [Examples include anxiety/depression/misbehavior/physical complaints (examples of misbehavior include fighting, driving recklessly, skipping school, vandalism, violating the rights of others, or doing illegal things)].	NO	YES
X2		Did these emotional/behavioral symptoms start within 3 months of the onset of the stressor?	NO	YES
X3	a	Are these emotional/behavioral symptoms causing marked distress beyond what would be expected?	NO	YES
	b	Are these emotional/behavioral symptoms causing significant impairment in your ability to function socially, at work, or at school?	NO	YES
X4		Are these emotional/behavioral symptoms due entirely to the loss of a loved one (bereavement) and are they similar in severity, level of impairment and duration to what most others would suffer under similar circumstances? (If so this is uncomplicated bereavement.)		
		HAS UNCOMPLICATED BEREAVEMENT BEEN RULED OUT?	NO	YES
X5		Have these emotional/behavioral symptoms continued for more than 6 months after the stress stopped?	NO	YES

WHICH OF THESE EMOTIONAL / BEHAVIORAL SUBTYPES ARE PRESENT? MARK ALL THAT APPLY

A Depression, tearfulness or hopelessness. ❑

B Anxiety, nervousness, jitteriness, worry. ❑

C Misbehavior (for example, fighting, driving recklessly, skipping school, vandalism, violating other's rights, doing illegal things). ❑

D Work problems, school problems, physical complaints or social withdrawal. ❑

IF MARKED:

- A only, then code as Adjustment disorder **with depressed mood**. 309.0
- B only, then code as Adjustment disorder **with anxious mood**. 309.24
- C only, then code as Adjustment disorder **of conduct**. 309.3
- A and B only, then code as Adjustment disorder **with mixed anxiety and depressed mood**. 309.28
- C and (A or B), then code as Adjustment disorder **of emotions and conduct**. 309.4
- D only, then code as Adjustment Disorder **unspecified**. 309.9

IF **X5** IS CODED **NO**, THEN CODE DISORDER **YES** WITH SUBTYPE.

NO	YES
Adjustment Disorder with_____ (see above for subtypes)	

Y. PREMENSTRUAL DYSPHORIC DISORDER

(➡ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

Y1	During the past year, were most of your menstrual periods preceded by a period lasting about one week when your mood changed significantly?	➡ NO	YES
Y2	During these periods, do you have difficulty in your usual activities or relationships with others, are you less efficient at work, or do you avoid other people?	➡ NO	YES
Y3	During these premenstrual episodes (but not at in the week after your period ends) do you have the following problems most of the time:		
a	Do you feel sad, low, depressed, hopeless, or self-critical?	NO	YES
b	Do you feel particularly anxious, tense, keyed up or on edge?	NO	YES
c	Do you often feel suddenly sad or tearful, or are you particularly sensitive to others' comments?	NO	YES
d	Do you feel irritable, angry or argumentative?	NO	YES
	ARE 1 OR MORE **Y3** ANSWERS CODED **YES**?	➡ NO	YES
e	Are you less interested in your usual activities, such as work, hobbies or meeting with friends?	NO	YES
f	Do you have difficulty concentrating?	NO	YES
g	Do you feel exhausted, tire easily, or lack energy?	NO	YES
h	Does your appetite change, or do you overeat or have specific food cravings?	NO	YES

Z. MIXED ANXIETY-DEPRESSIVE DISORDER

DO NOT USE THIS MODULE ALONE WITHOUT FIRST COMPLETING ALL THE ANXIETY AND MOOD DISORDERS.

(➡ MEANS : GO TO THE DIAGNOSTIC BOX AND CIRCLE NO.

[SKIP THIS DISORDER IF PATIENT 'S SYMPTOMS HAVE ALREADY MET CRITERIA FOR ANY OTHER DISORDER AND CODE NO IN THE DIAGNOSTIC BOX.]

		➡ NO	YES
Z1	Have you been depressed or down consistently for at least a **month**?		
Z2	When you felt depressed did you have any of the following symptoms for at least **one month**:		
	a. Did you have difficulty concentrating or find your mind going blank?	NO	YES
	b. Did you have trouble sleeping (difficulty falling asleep, waking up in the middle of the night, early morning wakening, or sleeping excessively)?	NO	YES
	c. Did you feel tired or low in energy?	NO	YES
	d. Did you feel irritable?	NO	YES
	e. Did you worry too persistently for at least a month?	NO	YES
	f. Did you cry easily?	NO	YES
	g. Were you always on the lookout for possible dangers?	NO	YES
	h. Did you fear the worst?	NO	YES
	i. Did you feel hopeless about the future?	NO	YES
	j. Was your self-confidence low, or did you feel worthless?	NO ➡	YES
	Summary of Z2: ARE **4** OR MORE **Z2** ANSWERS CODED **YES**?	NO ➡	YES
Z3	Do these symptoms cause you significant distress or impair your ability to function at work, socially, or in some other important way?	NO	YES

Z4 a Were you taking any drugs or medicines just before these symptoms began?

b Did you have any medical illness just before these symptoms began?

IN THE CLINICIAN'S JUDGMENT are either of these likely to be direct causes of the patient's symptoms?

HAS AN ORGANIC CAUSE BEEN RULED OUT? → NO YES UNCERTAIN

Z5 a. The patient's symptoms meet criteria for: Major Depression **LIFETIME** → NO YES

Dysthymia **LIFETIME** → NO YES

Panic Disorder **LIFETIME** → NO YES

Generalized Anxiety Disorder **LIFETIME** → NO YES

b. The patient's symptoms **CURRENTLY** meet criteria for: any other anxiety disorder → NO YES

any other mood disorder → NO YES

c. The patient's symptoms are better accounted for by another psychiatric disorder. NO YES

Z6 IS **Z5c** CODED **YES?**

NO **YES**

MIXED ANXIETY - DEPRESSIVE DISORDER **CURRENT**

THIS CONCLUDES THE INTERVIEW

APPENDIX 11
Beck's Depression Inventory (BDI-II)

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick the one statement in each group which best describes the way you have been feeling the PAST WEEK, INCLUDING TODAY. Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

This depression inventory can be self-scored.

Sadness
0. I do not feel sad.
1. I feel sad much of the time.
2. I am sad all the time.
3. I am so sad or unhappy that I can't stand it.

Pessimism
0. I am not discouraged about my future.
1. I feel more discouraged about my future than I used to be.
2. I do not expect things to work out for me.
3. I feel my future is hopeless and will only get worse.

Past Failure
0. I do not feel like a failure.
1. I have failed more than I should have.
2. As I look back I see a lot of failures.
3. I feel I am a total failure as a person.

Loss of Pleasure
0. I get as much pleasure as I ever did from the things I enjoy.
1. I don't enjoy things as much as I used to.
2. I get very little pleasure from the things I used to enjoy.
3. I can't get any pleasure from the things I used to enjoy.

Guilty Feelings
1. I don't feel particularly guilty.
2. I feel guilty over many things I have done or should have done.
3. I feel guilty most of the time.
4. I feel guilty all the time.

Punishment Feelings
1. I don't feel I am being punished.
2. I feel I may be punished.
3. I expect to be punished.
4. I feel I am being punished.

Self-Dislike
0. I feel the same about myself as ever.
1. I have lost confidence in myself.
2. I am disappointed in myself.
3. I dislike myself.

Self-Criticalness
0. I don't criticize or blame myself more than usual.
1. I am more critical of myself than I used to be.
2. I criticize myself for all of my faults.
3. I blame myself for everything bad than happens.

Suicidal Thoughts or Wishes
0. I don't have any thoughts of killing myself.
1. I have thoughts of killing myself, but I would not carry them out.
2. I would like to kill myself.
3. I would kill myself if I had the chance.

Crying
0. I don't cry anymore than I used to.
1. I cry more than I used to.
2. I cry over every little thing.
3. I feel like crying, but I can't.

Agitation
0. I am no more restless or wound up than usual.
1. I feel more restless or wound up than usual.
2. I am so restless or agitated that it's hard to stay still.
3. I am so restless or agitated that I have to keep moving or doing something.

Loss of Interest
0. I have not lost interest in other people or activities.
1. I am less interested in other people or things than before.
2. I have lost most of my interest in other people or things.
3. It's hard to get interested in anything.

Indecisiveness
0. I make decisions about as well as ever.
1. I find it is more difficult to make decisions than usual.
2. I have much greater difficulty in making decisions than I used to.
3. I have trouble making any decisions.

Worthlessness
0. I do not feel I am worthless.
1. I don't consider myself as worthwhile and useful as I used to.
2. I feel more worthless as compare to other people.
3. I feel utterly worthless.

Loss of Energy
0. I have as much energy as ever.
1. I have less energy than I used to have.
2. I don't have enough energy to do very much.
3. I don't have enough energy to do anything.

Changes in Sleeping Pattern
0. I have not experienced any change in my sleeping pattern.
1. I sleep somewhat less than usual. –or–
I sleep somewhat more than usual.
2. I sleep a lot less than usual. –or–
I sleep a lot more than usual.
3. I sleep most of the day. –or–
I wake up 1-2 hours early and can't get back to sleep.

Irritability
0. I am no more irritable than usual.
1. I am more irritable than usual.
2. I am much more irritable than usual.
3. I am irritable all the time.

Changes in Appetite
0. I have not experienced any change in my appetite.
1. My appetite is somewhat less than usual. –or–
My appetite is somewhat greater than usual.
2. My appetite is much less than usual. –or–
My appetite is much greater than usual.
3. I have no appetite at all. –or–
I crave food all the time.

Concentration Difficulty
0. I can concentrate as well as ever.
1. I can't concentrate as well as usual.
2. It's hard to keep my mind on anything for very long.
3. I find I can't concentrate on anything.

Tiredness or Fatigue
0. I am no more tired or fatigued than usual.
1. I get more tired or fatigued more easily than usual.
2. I am too tired or fatigued to do a lot of the things I used to do.
3. I am too tired or fatigued to do most of the things I used to do.

Loss of Interest in Sex
0. I have not noticed any recent change in my interest in sex.
1. I am less interested in sex than I used to be.
2. I am much less interested in sex now.
3. I have lost interest in sex completely.

INTERPRETING THE BECK DEPRESSION INVENTORY

Now that you have completed the questionnaire, add up the score for each of the twenty-one questions by counting the number to the right of each question you marked. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circles zero on each question. You can evaluate your depression according to the Table below.

Total Score_____Levels of Depression

1-10_____These ups and downs are considered normal

11-16_____ Mild mood disturbance

17-20_____Borderline clinical depression

21-30_____Moderate depression

31-40_____Severe depression

over 40_____Extreme depression

A PERSISTENT SCORE OF 17 OR ABOVE INDICATES THAT YOU MAY NEED MEDICAL TREATMENT

APPENDIX 12 HADS

Hospital Anxiety and Depression Scale (HADS)

Tick the box beside the reply that is closest to how you have been feeling in the past week.
Don't take too long over you replies: your immediate is best.

D	A		D	A	
		I feel tense or 'wound up':			**I feel as if I am slowed down:**
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		I still enjoy the things I used to enjoy:			**I get a sort of frightened feeling like 'butterflies' in the stomach:**
0		Definitely as much		0	Not at all
1		Not quite so much		1	Occasionally
2		Only a little		2	Quite Often
3		Hardly at all		3	Very Often
		I get a sort of frightened feeling as if something awful is about to happen:			**I have lost interest in my appearance:**
	3	Very definitely and quite badly	3		Definitely
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I may not take quite as much care
	0	Not at all	0		I take just as much care as ever
		I can laugh and see the funny side of things:			**I feel restless as I have to be on the move:**
0		As much as I always could		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		Worrying thoughts go through my mind:			**I look forward with enjoyment to things:**
	3	A great deal of the time	0		As much as I ever did
	2	A lot of the time	1		Rather less than I used to
	1	From time to time, but not too often	2		Definitely less than I used to
	0	Only occasionally	3		Hardly at all
		I feel cheerful:			**I get sudden feelings of panic:**
3		Not at all		3	Very often indeed
2		Not often		2	Quite often
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		I can sit at ease and feel relaxed:			**I can enjoy a good book or radio or TV program:**
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Very seldom

Please check you have answered all the questions

Scoring:

Total score: Depression (D) _____ Anxiety (A) _____

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)

ANNEXURE 13 தகவல் படிவம்

"மதுக் குடிப்பழக்கச் சார்பு(அடிமை) இணைப்போக்கு நோயாளிகள், மனச்சிதைவு (ஸ்கிட்ஸோஃப்ரீனியா) நோயாளிகள், மற்றும் இரு-துருவ உணர்ச்சிவயப்பாட்டு (பைப்போலார்) நோயாளிகள் ஆகியோரின் மனைவியரின் உணர்-குடும்பச் சுமை, வாழ்க்கைத் தரம், மற்றும் மனநலப் பாதிப்புகள் பற்றிய ஓர் ஒப்பீட்டுப் பகுப்பாய்வு"

தகவல்: ஆராய்ச்சியின் நோக்கமும், பயன்களும்:

உங்கள் பங்கேற்பு திட்டமிடப்பட்டுள்ள இந்த மருத்துவ ஆராய்ச்சி ஆய்வின் நோக்கம்:

இன்றைய நடைமுறை வாழ்வில் பெருகிவரும் மதுக்-குடிப்பழக்கச்-சார்பு/அடிமை இணைப்போக்கு நோயாளிகள், மனச்சிதைவு நோயாளிகள், மற்றும் இரு-துருவ-உணர்ச்சிவயப்பாட்டு நோயாளிகள், ஆகியோர்தம் மனம்-உடல் குறைபாடுகளால் வரும் --தம்மையே சரிவர பராமரித்துக்கொள்ள இயலாமை, குழப்பங்கள், மாறானப் புரிதல்கள் மற்றும் பிற கோளாறுகளால் -- அவர்தம் மனைவியர்க்கு மிகுதியான குடும்பச் சுமை, சேவைச்சுமை, நேரமின்மை, தம்விருப்பங்களின் சுருக்கம், முதலியவை ஏற்படுகின்றது; இவற்றினால் வாழ்க்கையின் தரத்தில்/பண்புநலனில் ஏற்றத்தாழ்வுகள், ஆகியவற்றை எதிர்கொள்ள வாய்ப்புள்ளது. இவை அளவுக்கதிகமாகும்போழ்து, நோயாளிகளை தொடர்ந்து பல்லாண்டுகளாக பராமரிக்கும் அம்மனைவியர்க்கு, ---நோயின் தன்மைக்கேற்ப குடும்பப் பொறுப்பு /கடமைச் சுமை, மற்றும் வாழ்வின் சுவைத்தன்மை, மற்றும் மனநிலையில் ஏதேனும் தாக்கமும் மாற்றமும் ஏற்படுகிறதா, சிலநேரங்களில் மனநலப் பாதிப்புகள் ஏதேனும் தோன்ற வாய்ப்பு உள்ளதா என்று, இவற்றைப் பற்றிய ஓர் ஒப்பீட்டுப் பகுப்பாய்வு நடத்தி, அறிவதே இந்த ஆய்வின் நோக்கம்.

ஆய்வு நடைமுறைகள்:

திருமணத்திற்குப் பின் தொடங்கி, குறைந்தது கடந்த 10 ஆண்டு காலமாக ----குடிப்பழக்கம் / மனச்சிதைவு / இருதுருவ உணர்ச்சிவயப்பாடு--- இவற்றில் ஏதேனும் ஒன்றைக் கொண்ட நோயாளிகள் மற்றும் அவர்தம் மனைவியர் இந்த ஆய்வில் சேர்த்துக் கொள்ளப்படுவார்கள்.

அந்தரங்கத் தன்மை:

உங்கள் / உங்கள் மனைவி/கணவரின் மருத்துவப் பதிவேடுகள் மிகவும் அந்தரங்கமாக வைத்துக் கொள்ளப்படும் மற்றும் இன்ன பிற மருத்துவர்கள்/விஞ்ஞானிகள்/இந்த ஆய்வின் தணிக்கையாளர்கள் அல்லது ஆராய்ச்சி ஆதரவாளர்களின் பிரதிநிதிகள் ஆகியோரிடமும் அவை வெளிப்படுத்தப்படும். இந்த ஆய்வின் முடிவுகள் அறிவியல் பத்திரிக்கைகளில் பிரசுரிக்கப்படலாம். ஆனால் பெயரை வெளியிடுவதன்மூலம் நோயாளிகள் அடையாளம் காட்டப்பட மாட்டார்கள்.

ஆய்வில் உங்கள் பங்கேற்பு மற்றும் உங்கள் உரிமைகள்:

இந்த ஆய்வில் உங்கள்/உங்கள் உறவினரின் பங்கேற்பு முழுவதும் உங்களுடைய விருப்பத்தைச் சார்ந்தது. இதில் நீங்கள் பங்கேற்க மறுக்கவோ, பாதியில் வெளியேறிவிடவோ அல்லது குறிப்பிட்ட கேள்விகளுக்கு விடையளிக்க மறுக்கவோ, உங்களுக்கு முழு உரிமை உண்டு. எப்படி இருந்தாலும் உங்கள்/உங்கள் உறவினரின் உடல்நிலைக்கேற்ப, உங்களுக்கு/உங்கள் உறவினருக்கு பொருத்தமான சிகிச்சை தொடர்ந்து அளிக்கப்படும். தாங்கள் இது குறித்து வேறு விபரங்கள் தெரிந்து கொள்ள விரும்பினால், எங்களிடம் கேட்டுத் தெரிந்துகொள்ளலாம்.

மேலும் விபரங்கள் அறிய கீழ் கண்ட நபரை அணுகவும்: (_____)
(தனியாகப் பிரித்தெடுத்து, ஆய்வில் பங்கேற்பவரிடம் தரப்பட வேண்டும்)

<u>சுய ஒப்புதல் படிவம்</u> -நோயாளி

ஆய்வின் பெயர் : : **மதுக் குடிப்பழக்கச் சார்பு(அடிமை) இணைப்போக்கு நோயாளிகள், மனச்சிதைவு (ஸ்கிட்ஸோஃப்ரீனியா) நோயாளிகள், மற்றும் இரு-துருவ உணர்ச்சிவயப்பாட்டு (பைப்போலார்) நோயாளிகள் ஆகியோரின் மனைவியரின் உணர்-குடும்பச் சுமை, வாழ்க்கைத் தரம், மற்றும் மனநலப் பாதிப்புகள் பற்றிய ஓர் ஒப்பீட்டுப் பகுப்பாய்வு**

ஆராய்ச்சி நிலையம் : மனநலப்புறநோயாளிகள் பிரிவு,
அரசு ஸ்டாண்ளி மருத்துவமனை,
சென்னை -600 001.

பங்கு பெறுபவரின் பெயர் :
பங்கு பெறுபவரின் எண் :

நோயாளி இதனை (√) குறிக்கவும்.

மேலே குறிப்பிடப்பட்டுள்ள மருத்துவ ஆய்வின் விவரங்கள் எனக்கு விளக்கப்பட்டது. என்னுடைய சந்தேகங்களை கேட்கவும் அதற்கான தகுந்த விளக்கங்களைப் பெறவும் வாய்ப்பளிக்கப்பட்டது. ☐

நான் / என் உறவினர் இவ்வாய்வில் தன்னிச்சையாகத்தான் பங்கேற்கிறேன். எந்த காரணத்தினாலும் எந்த கட்டத்திலும் எந்த சட்டச்சிக்கலுக்கும் உட்படாமல் நான் / என் உறவினர் இவ்வாய்வில் இருந்து விலகிக் கொள்ளலாம் என்று அறிந்துகொள்கிறேன். ☐

இந்த ஆய்வு சம்பந்தமாகவும், இதைச் சார்ந்த மேலும் ஆய்வு மேற்கொள்ளும் போதும், இந்த ஆய்வில் பங்குபெறும் மருத்துவர் என்னுடைய மருத்துவ அறிக்கைகளைப் பார்ப்பதற்கு என் அனுமதி தேவையில்லை என அறிந்து கொள்கிறேன். நான் / என் உறவினர் ஆய்வில் இருந்து விலகிக் கொண்டாலும் இது பொருந்தும் என அறிகிறேன். ☐

இந்த ஆய்வின் மூலம் கிடைக்கும் தகவல்களையும், பரிசோதனை முடிவுகளையும், மற்றும் சிகிச்சை தொடர்பான தகவல்களையும், மருத்துவர் மேற்கொள்ளும் ஆய்வில் பயன்படுத்திக் கொள்ளவும் அதை பிரசுரிக்கவும் / பதிப்பிக்கவும் என் முழு மனதுடன் சம்மதிக்கிறேன். ☐

இந்த ஆய்வில் பங்கு கொள்ள ஒப்புக்கொள்கிறேன். எனக்கு கொடுக்கப்படும் அறிவுரைகளின்படி நடந்து கொள்வதுடன் இந்த ஆய்வை மேற்கொள்ளும் மருத்துவ அணிக்கு உண்மையுடன் இருப்பேன் என்றும் உறுதி அளிக்கிறேன். என் உடல்நலம் பாதிக்கப்பட்டாலோ அல்லது எதிர்பாராத வழக்கத்திற்கு மாறான நோய்க் குறி தென்பட்டாலோ, உடனே அதனை மருத்துவ அணிக்கு தெரிவிப்பேன் என உறுதி அளிக்கிறேன். ☐

நோயாளி/பங்கேற்பவரின் கையொப்பம் ..... இடம் .....தேதி .....

கட்டை விரல் ரேகை ...

/பங்கேற்பவரின் காப்பாளரின் கையொப்பம் ..... இடம் .....தேதி .....

கட்டை விரல் ரேகை ...

பங்கேற்பவரின் பெயர் மற்றும் விலாசம் .....

.....

ஆய்வாளரின் கையொப்பாம் ..... இடம் .....தேதி .....

ஆய்வாளரின் பெயர் .....

நோயாளியின் பெயர் ..... பாலினம் : ஆண் ..... பெண் .....

வயது .....ஆண்டுகள் அல்லது பிறந்த தேதி .....

நோயாளியை தொடர்பு கொள்ளும் முகவரி .....

.....

.....

நோயாளியின் தொலைபேசி எண்.

நோயாளியின் உறவினர் பெயர் .....

பங்கேற்பவரின்
கையொப்பம்/
பெருவிரல்
பதிப்பு

1 மேலே குறிப்பிடப்பட்டுள்ள மருத்துவ ஆய்வின் ..... தேதியிட்ட நோயாளிகளுக்கான செய்தி நான் படித்திருக்கிறேன் மற்றும் புரிந்திருக்கிறேன்/ விவரிக்கப்பட்டுள்ளேன். கேள்விகள் கேட்கவும் அனுமதி வழங்கப்பட்டுள்ளேன் என நான் உறுதி செய்கிறேன்.

2 இந்த ஆய்வில் பங்கேற்பது என் / என் உறவினரின் சொந்த விருப்பப்படியே என நான் அறிந்திருக்கிறேன்.. மேலும் என் / என் உறவினரின் மருத்துவ சிகிச்சை கவனிப்பு அல்லது சட்டபூர்வ உரிமைகளுக்கு பாதிப்பு ஏற்படாமல் நான் எந்த நேரத்திலும் விலகிக் கொள்ளலாம் என்பதை அறிந்திருக்கிறேன்.

3 எத்திக்ஸ் கம்மிட்டி மற்றும் ரெகுலேட்டரி அத்தாரிட்டீஸ்-க்கும் நான் இந்த ஆய்விலிருந்து விலகினாலும் தற்போதைய மற்றும் எதிர்கால இந்த ஆய்வு சார்ந்த என் / என் உறவினர் உடல்நல குறிப்புகளை என் அனுமதியின்றி பார்க்க முடியும் என நான் அறிகிறேன். நான் / என் உறவினர் ஆய்வில் இருந்து விலகிக் கொண்டாலும் இது பொருந்தும் என அறிகிறேன்.

4 இந்த ஆய்வின் மூலம் கிடைக்கப்பெறும் குறிப்புகளையும் தகவல்களையும் மற்றும் பரிசோதனை முடிவுகளையும், உபயோகப்படுத்த தடை செய்ய மாட்டேன் என சம்மதிக்கிறேன். அதனால் அவைகள் விஞ்ஞானம், ஆராய்ச்சிக் கட்டுரைகள் போன்ற சம்மந்தப்பட்டவைகளுக்கு பயன் உள்ளதாக இருக்க வேண்டும். இக்குறிப்புகள், அதன் விளக்கங்கள், ஆய்வுக் கட்டுரைகள் ஆகியவற்றை பிரசுரிக்கவும் / பதிப்பிக்கவும் என் முழு மனதுடன் சம்மதிக்கிறேன்.

5 மேற்கூறிய ஆய்வில் என் சுய விருப்பத்தின்படி பங்கு கொள்ள நான் சம்மதிக்கிறேன்.

ஆய்வில் பங்கேற்பவர் / சட்டபூர்வமாக

ஏற்கப்பட்ட நபர் கையொப்பம் அல்லது

பெரு விரல் பதிவு

<u>சுய ஒப்புதல் படிவம் -</u> நோயாளியின் உறவினர்

ஆய்வின் பெயர் : : **மதுக் குடிப்பழக்கச் சார்பு(அடிமை) இணைப்போக்கு நோயாளிகள், மனச்சிதைவு (ஸ்கிட்ஸோஃப்ரீனியா) நோயாளிகள், மற்றும் இரு-துருவ உணர்ச்சிவயப்பாட்டு (பைப்போலார்) நோயாளிகள் ஆகியோரின் மனைவியரின் உணர்-குடும்பச் சுமை, வாழ்க்கைத் தரம், மற்றும் மனநலப் பாதிப்புகள் பற்றிய ஓர் ஒப்பீட்டுப் பகுப்பாய்வு**

ஆராய்ச்சி நிலையம் : மனநலப்புறநோயாளிகள் பிரிவு,
அரசு ஸ்டாண்ளி மருத்துவமனை,
சென்னை -600 001.

பங்கு பெறுபவரின் பெயர் :
பங்கு பெறுபவரின் எண் :

நோயாளியின் உறவினர் இதனை (√) குறிக்கவும்.

மேலே குறிப்பிடப்பட்டுள்ள மருத்துவ ஆய்வின் விவரங்கள் எனக்கு விளக்கப்பட்டது. என்னுடைய சந்தேகங்களை கேட்கவும் அதற்கான தகுந்த விளக்கங்களைப் பெரவும் வாய்ப்பளிக்கப்பட்டது. ☐

நான் / என் உறவினர் இவ்வாய்வில் தன்னிச்சையாகத்தான் பங்கேற்கிறேன். எந்த காரணத்தினாலும் எந்த கட்டத்திலும் எந்த சட்டச்சிக்கலுக்கும் உட்படாமல் நான் / என் உறவினர் இவ்வாய்வில் இருந்து விலகிக் கொள்ளலாம் என்று அறிந்துகொள்கிறேன். ☐

இந்த ஆய்வு சம்பந்தமாகவும், இதைச் சார்ந்த மேலும் ஆய்வு மேற்கொள்ளும் போதும், இந்த ஆய்வில் பங்குபெறும் மருத்துவர் என்னுடைய உறவினர் மருத்துவ அறிக்கைகளைப் பார்ப்பதற்கு என் அனுமதி தேவையில்லை என அறிந்து கொள்கிறேன். நான் / என் உறவினர் ஆய்வில் இருந்து விலகிக் கொண்டாலும் இது பொருந்தும் என அறிகிறேன். ☐

இந்த ஆய்வின் மூலம் கிடைக்கும் தகவல்களையும், என் உறவினர் நேர்முக பரிசோதனை முடிவுகளையும், மற்றும் சிகிச்சை தொடர்பான தகவல்களையும், மருத்துவர் மேற்கொள்ளும் ஆய்வில் பயன்படுத்திக் கொள்ளவும் அதை பிரசுரிக்கவும் / பதிப்பிக்கவும் என் முழு மனதுடன் சம்மதிக்கிறேன். ☐

இந்த ஆய்வில் பங்கு கொள்ள ஒப்புக்கொள்கிறேன். எனக்கு கொடுக்கப்படும் அறிவுரைகளின்படி நடந்து கொள்வதுடன் இந்த ஆய்வை மேற்கொள்ளும் மருத்துவ அணிக்கு உண்மையுடன் இருப்பேன் என்றும் உறுதி அளிக்கிறேன். எதிர்பாராத வழக்கத்திற்கு மாறான நோய்க் குறி தென்பட்டாலோ, உடனே அதனை மருத்துவ அணிக்கு தெரிவிப்பேன் என உறுதி அளிக்கிறேன். ☐

பங்கேற்கும் உறவினரின் கையொப்பம் ..... இடம் .....தேதி .....

கட்டை விரல் ரேகை ...

/பங்கேற்பவரின் காப்பாளரின் கையொப்பம் ..... இடம் .....தேதி .....

கட்டை விரல் ரேகை ...

பங்கேற்பவரின் பெயர் மற்றும் விலாசம் .....

.....

ஆய்வாளரின் கையொப்பாம் ..... இடம் .....தேதி .....

ஆய்வாளரின் பெயர் .....

நோயாளியின் உறவினர் பெயர் ..... பாலினம் : ஆண் .....---; பெண் .....

வயது .....ஆண்டுகள் அல்லது பிறந்த தேதி .....

நோயாளியின் உறவினர் தொடர்பு கொள்ளும் முகவரி .....

.....

.....

நோயாளியின் உறவினர் தொலைபேசி எண்.

நோயாளியின் பெயர் .....

பங்கேற்பவரின்
கையொப்பம்/

பெரு விரல்
பதிப்பு

1 மேலே குறிப்பிடப்பட்டுள்ள மருத்துவ ஆய்வின் ..... தேதியிட்ட நோயாளிகளுக்கான செய்தி நான் படித்திருக்கிறேன் மற்றும் புரிந்திருக்கிறேன்/ விவரிக்கப்பட்டுள்ளேன். கேள்விகள் கேட்கவும் அனுமதி வழங்கப்பட்டுள்ளேன் என நான் உறுதி செய்கிறேன்.

2 இந்த ஆய்வில் பங்கேற்பது என் / என் உறவினரின் சொந்த விருப்பப்படியே என நான் அறிந்திருக்கிறேன்.. மேலும் என் / என் உறவினரின் மருத்துவ சிகிச்சை கவனிப்பு அல்லது சட்டபூர்வ உரிமைகளுக்கு பாதிப்பு ஏற்படாமல் நான் எந்த நேரத்திலும் விலகிக் கொள்ளலாம் என்பதை அறிந்திருக்கிறேன்.

3 எத்திக்ஸ் கம்மிட்டி மற்றும் ரெகுலேட்டரி அத்தாரிட்டீஸ்-க்கும் நான் இந்த ஆய்விலிருந்து விலகினாலும் தற்போதைய மற்றும் எதிர்கால இந்த ஆய்வு சார்ந்த என் / என் உறவினர் உடல்நல குறிப்புகளை என் அனுமதியின்றி பார்க்க முடியும் என நான் அறிகிறேன். நான் / என் உறவினர் ஆய்வில் இருந்து விலகிக் கொண்டாலும் இது பொருந்தும் என அறிகிறேன்.

4 இந்த ஆய்வின் மூலம் கிடைக்கப்பெறும் குறிப்புகளையும் தகவல்களையும் மற்றும் முடிவுகளையும், உபயோகப்படுத்த தடை செய்ய மாட்டேன் என சம்மதிக்கிறேன். அதனால் அவைகள் விஞ்ஞானம், ஆராய்ச்சிக் கட்டுரைகள் போன்ற சம்மந்தப்பட்டவைகளுக்கு பயன் உள்ளதாக இருக்க வேண்டும். இக்குறிப்புகள், அதன் விளக்கங்கள், ஆய்வுக் கட்டுரைகள் ஆகியவற்றை பிரசுரிக்கவும் / பதிப்பிக்கவும் என் முழு மனதுடன் சம்மதிக்கிறேன்.

5 மேற்கூறிய ஆய்வில் என் சுய விருப்பத்தின்படி பங்கு கொள்ள நான் சம்மதிக்கிறேன்.

ஆய்வில் பங்கேற்பவர் / சட்டபூர்வமாக

ஏற்கப்பட்ட நபர் கையொப்பம் அல்லது

பெரு விரல் பதிவு

INSTITUTIONAL ETHICAL COMMITTEE, STANLEY MEDICAL COLLEGE, CHENNAI-1

Title of the Work : A Comparative analysis of family burden, quality of Life and psychiatric morbidity between female spouses of patients with Alcohol dependence syndrome, Schizophrenia and Bipolar affective disorder.

Principal Investigator : Dr. A S Senthil Kumar

Designation : PG in MD (Psychiatry)

Department : Department of Psychiatry
Government Stanley Medical College,
Chennai-01

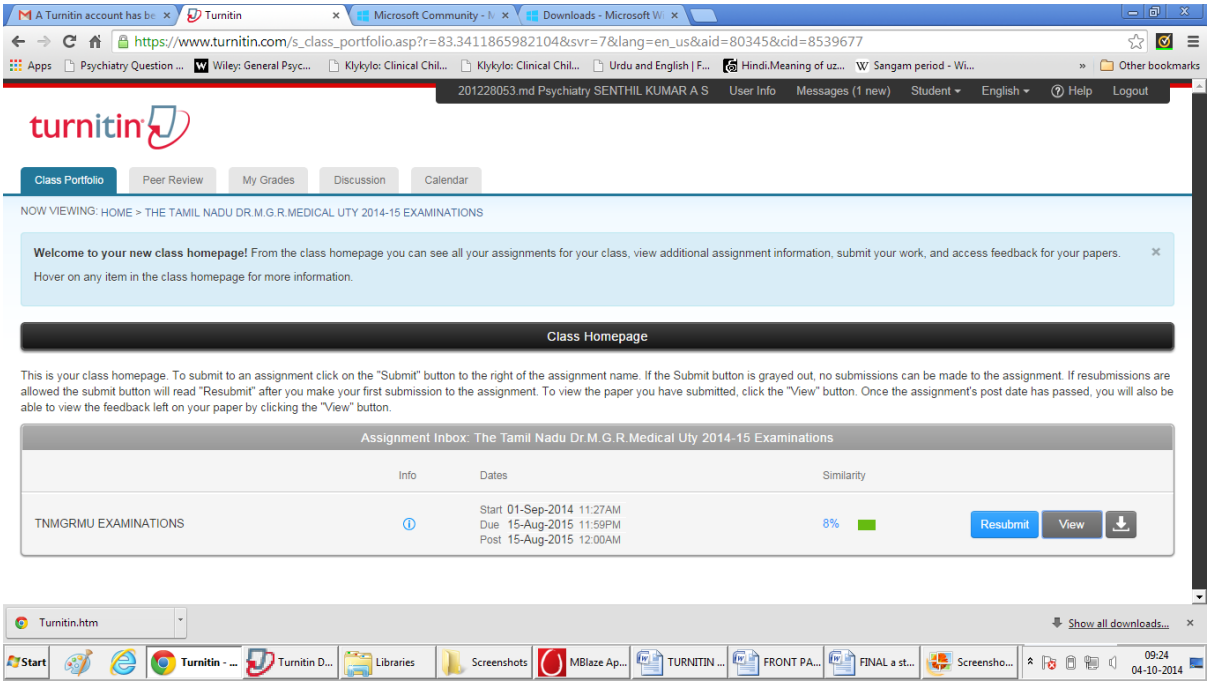
The request for an approval from the Institutional Ethical Committee (IEC) was considered on the IEC meeting held on 02.07.2014 at the Council Hall, Stanley Medical College, Chennai-1 at 2PM

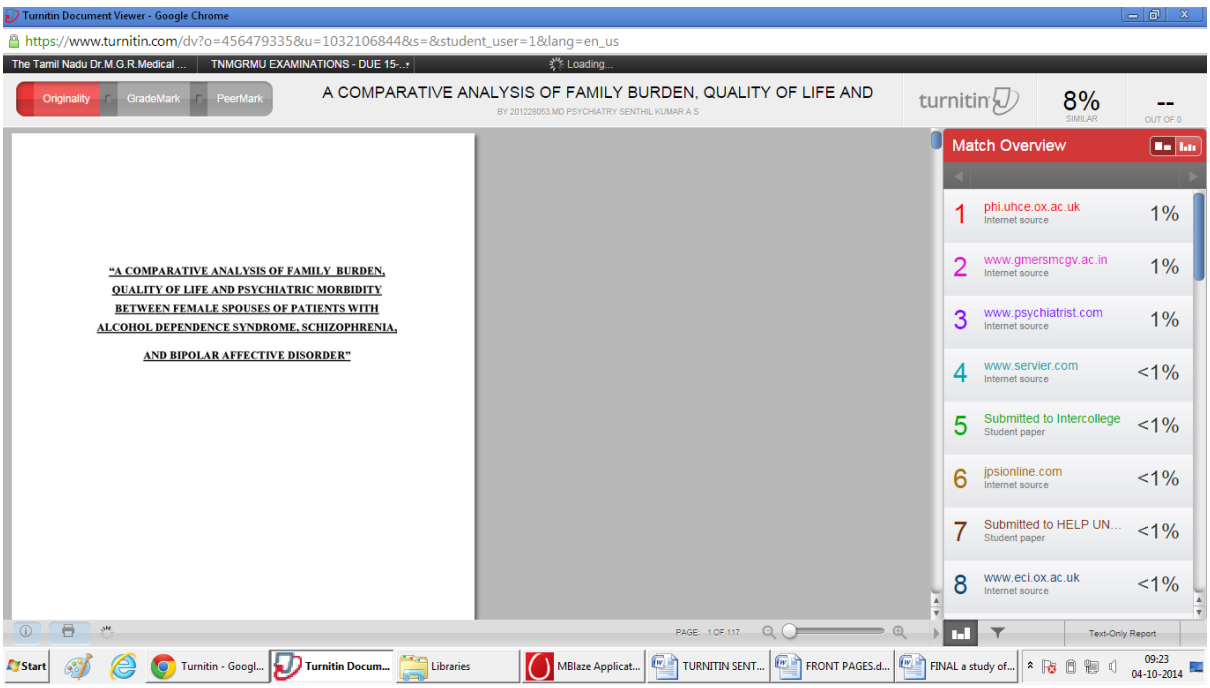
The members of the Committee, the secretary and the Chairman are pleased to approve the proposed work mentioned above, submitted by the principal investigator.

The Principal investigator and their team are directed to adhere to the guidelines given below:

1. You should inform the IEC in case of changes in study procedure, site investigator investigation or guide or any other changes.
2. You should not deviate from the area of the work for which you applied for ethical clearance.
3. You should inform the IEC immediately, in case of any adverse events or serious adverse reaction.
4. You should abide to the rules and regulation of the institution(s).
5. You should complete the work within the specified period and if any extension of time is required, you should apply for permission again and do the work.
6. You should submit the summary of the work to the ethical committee on completion of the work.

MEMBER SECRETARY,
IEC, SMC, CHENNAI


https://www.turnitin.com/s_class_portfolio.asp?r=83.3411865982104&svr=7&lang=en_us&aid=80345&cid=8539677
201228053.md Psychiatry SENTHIL KUMAR A S
User Info
Messages (1 new)
Student
English
Help
Logout
turnitin
Class Portfolio
Peer Review
My Grades
Discussion
Calendar
NOW VIEWING: HOME > THE TAMIL NADU DR.M.G.R.MEDICAL UTY 2014-15 EXAMINATIONS
Welcome to your new class homepage! From the class homepage you can see all your assignments for your class, view additional assignment information, submit your work, and access feedback for your papers.
Hover on any item in the class homepage for more information.
Class Homepage
This is your class homepage. To submit to an assignment click on the "Submit" button to the right of the assignment name. If the Submit button is grayed out, no submissions can be made to the assignment. If resubmissions are allowed the submit button will read "Resubmit" after you make your first submission to the assignment. To view the paper you have submitted, click the "View" button. Once the assignment's post date has passed, you will also be able to view the feedback left on your paper by clicking the "View" button.
Assignment Inbox: The Tamil Nadu Dr.M.G.R.Medical Uty 2014-15 Examinations
Info
Dates
Similarity
TNMGRMU EXAMINATIONS
Start 01-Sep-2014 11:27AM
Due 15-Aug-2015 11:59PM
Post 15-Aug-2015 12:00AM
8%
Resubmit
View
Turnitin.htm
Show all downloads...


Turnitin Document Viewer - Google Chrome
https://www.turnitin.com/dv?o=456479335&u=1032106844&s=&student_user=1&lang=en_us
The Tamil Nadu Dr.M.G.R.Medical ...
TNMGRMU EXAMINATIONS - DUE 15-..
Loading...
Originality
GradeMark
PeerMark
A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND
BY 201228053.MD PSYCHIATRY SENTHIL KUMAR A S
turnitin
8%
SIMILAR
--
OUT OF 0
"A COMPARATIVE ANALYSIS OF FAMILY BURDEN, QUALITY OF LIFE AND PSYCHIATRIC MORBIDITY BETWEEN FEMALE SPOUSES OF PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME, SCHIZOPHRENIA, AND BIPOLAR AFFECTIVE DISORDER"
Match Overview
1 phi.uhce.ox.ac.uk Internet source 1%
2 www.gmersmcgv.ac.in Internet source 1%
3 www.psychiatrist.com Internet source 1%
4 www.servier.com Internet source <1%
5 Submitted to Intercollege Student paper <1%
6 jpsionline.com Internet source <1%
7 Submitted to HELP UN... Student paper <1%
8 www.eci.ox.ac.uk Internet source <1%
PAGE 1 OF 117
Text-Only Report

MASTER KEY

B	AGE IN YEARS					
C	AGE	<=35 1	36-40 2	41-45 3	46-50 4	>50 5
D	RELIGION	HINDU 1	MUSLIM 2	CHRISTIAN 3	OTHERS 4	
E	Education	Illiterate /<5th class 1	5-8 class 2	9-12 class 3	Undergraduate 4	Postgraduate or Professional course 5
F	Marriage Duration	10-13yrs 1	14-17yrs 2	18-21yrs 3	>21yrs 4	
G	Family type	Nuclear 1	Extended nuclear 2	Joint 3		
H	Number of children <=15yrs age	0 4	1 3	2 2	>=3 1	
I	Number of children >15yrs age	0 0	1 1	2 2	>=3 3	
J	Locality	Rural 1	Semi-urban 2	Urban 3		
K	Occuption	Unemployed 0	Unskilled 1	Semiskilled 2	Skilled 3	Professional 4
L	Current duration of unemployed	<1yr 4	1-5yr 3	5-10yr 2	>10yrs 1	

M	Total duration of unemployed in 10yrs	<1yr 3	1-5yrs 2	5-10yrsyrs 1	>10yrs 0	
N	Net Annual Family Income	<60,000 1	60,000-1,20,000 2	1,20,000-1,80,000 3	>1,80,000 4	
O	Percentage of patient's net contribution to income in 1yr	0-10% 1	11-25% 2	26-50% 3	51-75% 4	>75% 5
P	Percentage of patient's net contribution to income in 5yrs	0-10% 1	11-25% 2	26-50% 3	51-75% 4	>75% 5
Q	Age of spouse in yrs					
R	Spouse education	Illiterate \<5th class 1	5-8 class 2	9-12 class 3	Undergraduate 4	Postgraduate or Professional course 5
S	Spouse occupation	Unemployed 0	Unskilled 1	Semiskilled 2	Skilled 3	Professional 4
T	Percentage of spouse's net contribution to income in 1yr	0-10% 1	11-25% 2	26-50% 3	51-75% 4	>75% 5
U	Percentage of spouse's net contribution to income in 5yrs	0-10% 1	11-25% 2	26-50% 3	51-75% 4	>75% 5

V	Duration of illness	10-13yrs 4	14-17yrs 3	18-21yrs 2	>21yrs 1		
W	Duration of current complications/episode	<1wk 5	1-2wk 4	2-4wk 3	4-8wk 2	>8wks 1	
X	Total duration of abstinence/symptom free period past 5yrs	<1yr 1	1-2yr 2	2-3yr 3	3-4yr 4	>4yrs 5	
Y	Current alcohol dependence predominant complications/episode	AWS + alcohol induced psychosis 1	Delirium tremens 2	AWS + alcohol induced Mood disorder 3	alcohol Seizures 4	AWS + alcohol induced Amnesic syndrome 5	Nil or Withdrawal state AWS only 6
Y in bipolar group	Current episode	Mania 1	Mixed 2	Depression 3			
Z	Frequency of other general medical/psychiatric ward admissions in past 10yrs	0 5	1-2. 4	3-4. 3	5-6. 2	>6 1	
AA	Frequency of ICU admissions in past 10yrs	0 5	1-2. 4	3-4. 3	5-6. 2	>6 1	
AB	Number of Bipolar episodes in past 10yrs	0-2 5	3-5. 4	6-8. 3	9-11. 2	>10 1	

AC	Time since last admission	<1wk 1	1wk-1month 2	1-3month 3	>3months 4			
AD alcohol dependence	SADDQ	1-9. low 3	10-19. medium 2	20-45. high 1				
AD bipolar	CGI-BP-S severity	1 7	2 6	3 5	4 4	5 3	6 2	7 1
AD schizophrenia	CGI-SCH-S severity	1 7	2 6	3 5	4 4	5 3	6 2	7 1
AE	Apathy AI severity	<3 no apathy 4	3-8. mild 3	9-15. moderate 2	16-36 severe 1			
AG to AO	Burden Assessment Scale subscale scores							
AP	total BAS score							
AQ	Type of burden	40-60 minimal 4	61-80 moderate 3	81-100 severe 2	101-120 very severe 1			
AR	PSLES 1yr life events total score							
AS to AX	Domain1 WHOQOL	Domain2 WHOQOL	Domain3 WHO	Domain4 WHOQOL	1WHOQOL	2WHOQOL		

			QOL					
	AS	AT	AU	AV	AW	AX		
AY	GHQ12	<=2 2	>2 1					
AZ	Psychiatric diagnosis	Severe Depression 1	Moderate Depression 2	Mild Depression 3	Dysthymia 4	Mixed Anxiety and Depression/Adjustment disorder 5	Nil 6	GHQ <=2 7
BA	BDI score							
BB	BDI severity	0-10. nil 6	11-16. mild 5	17-20. borderline 4	21-30. moderate 3	31-40 severe 2	>40 extremely severe 1	
BC	HADS-A score							
BD	HADS-A rating	0-8 nil 3	9-10. borderline abnormal 2	>11 abnormal 1				
BE	Total caregiving duration	10-13yrs 1	14-17yrs 2	18-21yrs 3	>21yrs 4			
BF	Spouse Age code	<=35 1	36-40 2	41-45 3	46-50 4	>50 5		

ALCOHOL DEPENDENCE

| SlimNumber | group | Age_yrs | Age | Religion | Education | Marriage_duration | Family_type | Children_15yrs | Children15yrs | Locality | Occupation | Current_duration_unemploy | Total_unemployed_duration | Income_family | Pt_net_contribution_to_fami | Pt_net_contribution_to_fami | Age_spouse | Education_spouse | Spouse_occupation | Spouse_net_contribution_to | Spouse_net_contribution_to | Duration_of_dependence | Current_psych_complicatio | Total_duration_of_abstinenc | Psychiatric_complications | Frequency_of_medicalpsyc | Frequency_of_ICU_admissi | Number_of_episodes | TIME_SINCE_LAST_ADMI | severity_SADDQscore | Apathy_Inventory | CRASHBOUNCEscore | BASspouse_related | BAShealth | BASsupport | BASroutine | BASpt_support | BASresponsibility | BASother_relations | BASpt_behaviour | BASstrategy_CG | BAStotal | BAStype_of_burden | PSLES_1_yr | Domain1_WHOQOL | Domain2_WHOQOL | Domain3_WHOQOL | Domain4_WHOQOL | whqol | @1QOL | @2QOL | GHQ12 | Psychiatric_diagnosis | BDI_score | BDI_rating | HADS_score | HADS_rating | Duration_of_caregiving | Age_of_spouse | PT_DIAGNOSIS |
|---|---|---

Sl.NO:	Age yrs	Age	Religion	Education	Marriage duration	Family type	Children <=15yrs	Children>15yrs	Locality	Occupation	Current duration unemploy	Total unemployed duration	Income family	Pt net contribution to fami	Pt net contribution to fami	Age spouse	Education spouse	Spouse occupation	Spouse net contribution to	Spouse net contribution to	Duration since onset	Current episode duration	Total symptom-free period	Episode -mania/mixed/dep	Frequency of psychiatric ad	Frequency of ICU admissior	Number of episodes in past	TIME SINCE LAST ADMISSION	severity CGI-BP-S	Apathy Inventory-CG	CRASHBOUNCEscore	BASspouse related	BAShealth	BASsupport	BASsroutine	BASpt support	BASresponsibility	BASsother relations	BASpt behaviour	BASstrategy CG	BAStotal	BAStype of burden	PSLES 1 yr	Domain1 WHOQOL	Domain2 WHOQOL	Domain3 WHOQOL	Domain4 WHOQOL	TOT	1QOL	2QOL	GHQ12	Psychiatric diagnosis	BDI score	BDI rating	HADS score	HADS rating	Duration of caregiving	Age of spouse	PT DIAGNOSIS
1	29	1	2	2	1	1	2	0	1	1	3	2	1	5	4	28	2	0	1	3	3	5	3	3	4	4	3	4	11	1	2	15	18	13	15	9	12	8	10	11	111	1	76	22	17	6	25	70	2	4	1	1	34	2	6	3	1	1	2
2	34	1	1	1	1	2	0	1	0	3	2	2	5	4	31	2	0	1	3	4	5	4	1	4	4	3	4	11	4	4	15	18	13	15	12	9	9	11	8	110	1	166	24	19	8	27	78	3	4	1	5	10	6	14	1	1	1	2
3	34	1	1	3	1	1	2	0	3	3	3	2	2	1	3	27	3	2	5	4	4	3	4	3	3	4	2	3	13	2	4	12	14	7	10	6	10	5	6	4	74	3	53	23	19	8	27	77	3	4	1	2	28	3	6	3	1	1	2
4	35	1	1	2	2	2	1	0	1	0	3	1	4	1	1	28	2	2	5	4	3	5	2	3	2	3	2	2	11	1	2	15	18	13	15	10	11	7	9	10	108	1	164	21	16	5	24	66	2	2	1	1	44	1	5	3	2	1	2
5	34	1	3	3	1	3	2	0	3	0	3	0	2	1	1	35	3	2	5	4	3	4	1	2	3	3	2	2	12	2	2	14	17	7	14	7	6	9	9	12	95	2	204	22	18	8	26	74	3	4	1	2	29	3	5	3	1	1	2
6	35	1	1	3	1	3	2	0	3	2	3	2	3	1	2	28	2	2	5	4	3	2	3	1	2	3	1	3	16	3	4	7	10	5	8	7	4	7	7	4	59	4	171	24	20	10	28	82	3	4	1	6	10	6	7	3	1	1	2
7	28	1	2	3	1	1	2	0	3	3	3	1	3	1	2	27	3	2	5	5	3	3	2	1	2	2	1	3	14	3	2	11	14	7	11	8	5	8	8	5	77	3	234	23	19	9	27	78	3	4	1	6	8	6	6	3	1	1	2
8	29	1	1	4	1	2	1	0	1	0	2	1	4	1	1	28	4	4	4	4	5	3	5	3	1	2	3	2	4	11	4	2	14	17	11	15	12	9	9	12	10	109	1	189	22	17	6	26	71	3	4	1	5	9	6	13	1	1	1	2
9	28	1	1	3	1	1	2	0	2	2	3	2	2	1	1	27	3	1	5	5	4	5	3	3	3	3	2	3	11	1	2	15	18	12	15	9	12	6	9	9	105	1	131	21	16	6	24	67	2	3	1	1	47	1	5	3	1	1	2
10	38	2	1	3	1	3	2	0	3	0	3	2	1	5	2	37	2	0	1	5	3	4	4	3	4	4	3	4	12	1	3	14	17	7	15	6	12	7	7	9	94	2	28	24	20	9	27	80	3	4	1	1	36	2	6	3	1	2	2
11	36	2	1	1	1	1	2	0	1	1	4	2	3	1	2	36	2	2	5	5	4	3	3	2	4	5	3	4	13	2	4	11	14	7	11	6	5	8	5	8	75	3	93	24	21	10	27	82	3	4	1	4	7	6	6	3	1	2	2
12	39	2	1	2	2	2	2	1	3	0	3	1	4	1	1	38	2	2	5	4	3	5	1	3	3	3	2	3	11	1	3	14	18	13	15	9	12	7	11	10	109	1	131	22	17	7	26	72	3	4	1	1	37	2	6	3	2	2	2
13	38	2	1	3	2	3	2	1	3	2	4	3	4	4	4	37	3	0	1	1	4	5	5	1	4	5	3	3	11	4	4	15	17	11	15	12	9	9	12	9	109	1	142	23	18	7	27	75	3	4	1	5	9	6	15	1	1	2	2
14	37	2	1	3	1	3	2	0	1	0	3	1	3	1	2	32	2	2	4	4	3	3	2	3	2	3	1	3	13	2	3	11	14	7	10	5	11	5	6	5	74	3	105	23	19	8	27	77	3	4	1	2	23	3	5	3	1	1	2
15	36	2	1	2	2	3	3	0	3	0	2	1	3	1	3	30	2	1	5	3	4	3	1	3	1	1	1	1	11	1	2	15	17	13	15	10	12	7	10	9	108	1	220	21	16	5	25	67	2	4	1	1	43	1	5	3	1	1	2
16	36	2	1	4	1	1	2	0	3	3	3	2	1	5	3	30	4	0	1	4	3	3	4	2	4	3	2	4	13	1	2	11	14	7	11	6	5	8	5	9	76	3	93	22	18	7	26	73	3	4	1	1	37	2	7	3	1	1	2
17	37	2	1	5	2	2	3	0	3	0	3	2	3	1	3	31	5	4	4	4	3	3	3	2	3	4	2	3	13	3	3	12	14	7	11	5	5	8	5	10	77	3	157	25	21	10	29	85	3	4	2							1	1	2
18	38	2	1	4	1	1	2	0	2	0	2	1	1	1	1	37	4	3	5	5	2	5	1	1	2	3	1	2	11	4	1	15	17	12	15	12	9	9	12	9	110	1	250	22	17	6	26	71	3	4	1	5	10	6	17	1	1	2	2
19	38	2	1	3	2	1	3	0	1	2	3	1	2	1	1	34	3	2	5	5	3	5	1	3	3	3	2	3	11	1	2	15	18	13	15	10	12	8	9	9	109	1	103	21	16	5	25	67	2	4	1	1	45	1	7	3	2	1	2
20	39	2	1	4	2	2	2	0	3	0	3	1	3	1	2	32	4	3	3	4	2	4	1	1	2	3	1	2	12	3	2	13	15	11	13	10	7	9	10	6	94	2	338	23	19	8	27	77	3	4	1	6	7	6	5	3	2	1	2
21	40	2	1	3	2	2	2	1	2	3	3	2	4	1	2	37	2	1	3	4	3	5	4	1	3	3	2	3	11	4	4	14	17	12	15	12	8	9	12	9	108	1	205	23	18	7	27	75	3	4	1	5	8	6	19	1	2	2	2
22	35	1	2	3	1	1	2	0	2	0	3	0	1	1	1	31	3	2	5	5	2	4	1	3	3	3	2	4	12	1	2	15	18	9	15	10	12	7	8	10	91	2	131	22	18	7	25	72	2	4	1	1	36	2	7	3	1	1	2
23	34	1	1	1	1	2	2	0	1	1	4	3	3	5	3	31	2	2	1	4	3	5	5	1	5	5	4	4	11	4	4	15	18	12	15	12	8	9	11	7	107	1	142	24	19	8	27	78	3	4	1	5	8	6	16	1	1	1	2
24	34	1	2	3	1	1	1	0	2	2	3	1	3	1	1	32	3	2	5	5	3	4	2	3	3	3	3	3	12	1	2	15	17	9	14	8	11	6	7	8	95	2	131	22	18	7	25	72	2	4	1	1	34	2	7	3	1	1	2
25	34	1	1	3	1	2	2	0	1	3	3	2	3	1	3	31	3	2	5	4	3	5	3	1	3	3	3	4	11	4	3	14	18	12	15	11	10	9	12	7	108	1	284	23	18	7	26	74	3	4	1	5	7	6	18	1	1	1	2
26	35	1	1	2	1	1	1	0	2	0	3	1	1	1	2	32	2	2	5	5	2	3	1	2	3	3	2	3	13	2	2	11	14	8	11	6	6	7	7	10	80	3	209	22	18	7	25	72	2	4	1	1	35	2	6	3	1	1	2
27	33	1	2	3	1	2	2	0	1	2	3	2	3	1	3	27	3	2	5	4	4	4	4	3	2	4	1	2	12	2	3	14	18	9	15	7	12	6	7	8	96	2	79	24	20	9	27	80	3	4	1	3	19	4	7	3	1	1	2
28	34	1	2	5	1	3	1	0	3	1	4	3	3	3	4	34	4	4	4	1	4	5	5	3	5	5	4	4	11	2	4	14	18	12	15	10	12	7	10	10	108	1	76	23	18	7	28	76	3	4	1	2	29	3	7	3	1	1	2
29	40	2	1	3	1	2	1	0	3	2	3	1	3	1	1	31	3	2	3	4	1	4	1	3	3	2	2	4	12	1	1	12	16	10	12	10	6	6	11	11	94	2	245	23	19	8	27	77	3	4	1	1	34	2	6	3	1	1	2
30	37	2	1	3	2	1	2	1	3	0	2	1	4	1	2	36	2	2	5	5	3	5	1	3	2	3	1	3	11	1	2	15	17	12	15	9	12	7	10	10	107	1	131	22	17	6	24	69	3	4	1	1	39	2	7	3	2	2	2
31	36	2	1	2	1	1	2	0	2	0	2	1	4	1	1	31	2	2	5	5	3	4	2	3	1	3	1	2	12	2	2	15	18	7	15	7	12	6	7	7	94	2	164	23	19	8	26	76	3	4	1	2	21	3	7	3	1	1	2
32	38	2	1	3	1	3	2	0	3	0	2	1	2	1	1	34	2	1	3	5	4	1	3	1	2	3	1	2	16	3	3	6	11	5	8	7	4	7	7	4	59	4	204	24	20	9	27	80	3	4	2							1	1	2
33	37	2	1	4	1	1	2	0	3	0	2	1	3	1	1	33	4	3	5	4	1	5	1	1	1	3	1	1	12	3	2	13	16	8	12	10	7	9	11	7	93	2	237	23	19	10	25	77	2	4	2							1	1	2
34	38	2	1	3	2	2	1	0	2	2	3	2	4	1	3	32	3	3	4	4	3	1	3	2	3	4	2	1	11	2	2	15	18	14	15	10	10	9	10	12	113	1	200	22	17	6	25	70	3	4	1	2	24	3	7	3	2	1	2
35	44	3	1	3	2	1	2	1	3	0	2	0	3	1	1	42	1	1	5	5	1	5	1	1	2	3	1	2	11	4	2	14	17	11	15	12	10	9	12	10	110	1	222	22	17	6	24	69	2	4	1	5	7	6	9	2	2	3	2
36	34	1	1	3	1	3	2	0	1	2	3	2	1	1	2	37	3	2	4	5	2	5	3	1	4	4	3	4	11	4	4	14	18	13	15	11	9	8	11	7	106	1	142	24	19	10	27	80	3	4	1	5	7	6	11	1	1	1	2
37	30	1	1	4	1	2	1	0	1	0	2	1	4	1	1	29	4	4	4	5	3	5	3	1	2	3	2	4	11	4	2	14	17	11	15	12	10	9	12	10	110	1	197	22	17	7	26	72	3	4	1	5	9	6	13	1	1	1	2
38	34	1	2	3	2	1	2	0	3	1	3	2	1	2	2	34	2	2	5	4	4	4	4	1	3	3	2	3	12	3	1	14	16	8	13	10	9	8	11	7	96	2	189	23	19	9	26	77	3	4	1	6	9	6	7	3	1	2	2
39	45	3	3	3	2	3	2	0	1	0	2	0	2	1	1	41	3	2	3	5	3	4	2	3	2	3	1	2	12	2	2	15	17	8	15	8	12	7	6	7	95	2	164	25	19	8	26	78	3	4	1	3	20	4	6	3	2	3	2
40	45	3	1	3	1	3	3	0	2	0	1	1	2	1	3	43	2	2	4	4	3	2	1	3	1	2	1	1	15	2	3	9	10	5	8	4	7	3	6	5	57	4	194	24	20	9	27	80	3	4	1	4	10	6	6	3	1	3	2
41	43	3	1	2	3	1	3	2	3	0	2	0	4	1	1	35	2	1	5	5	3	4	2	2	2	3	1	3	12	3	3	14	18	9	14	8	7	9	6	10	95	2	171	24	20	9	27	80	3	4	2							2	3	2
42	44	3	1	5	3	2	3	1	2	0	2	1	4	1	1	36	2	2	4	4	3	5	3	1	2	3	1	3	11	4	2	15	18	13	14	12	8	9	12	10	111	1	381	23	18	7	26	74	3	4	1	5	9	6	9	2	2	2	2
43	50	4	1	3	3	2	3	1	2	0	1	0	4	1	1	38	2	1	4	3	2	5	1	3	1	2	1	1	12	1	2	14	17	7	14	10	7	7	11	7	94	2	333	23	19	8	25	75	2	4	1	1	40	2	7	3	3	2	2
44	48	4	1	2	4	3	4	2	3	0	3	1	4	1	1	39	2	2	3	4	2	2	2	1	2	3	1	3	16	3	4	7	10	5	8	7	4	7	7	4	59	4	203	24	20	9	26	79	3	4	2							3	2	2
45	35	1	3	1	2	1	2	0	2	1	3	2	2	4	3	28	2	0	1	4	3	3	3	1	4	5	3	4	13	3	3	12	14	7	11	9	5	7	9	5	79	3	111	25	21	10	28	84	3	4	1	6	10	6	7	3	2	1	2
46	34	1	1	3	1	2	1	0	1	3	3	1	3	1	2	31	3	2	5	5	3	5	2	2	3	3	2	4	11	1	2	15	17	13	15	10	10	8	7	10	105	1	171	21	16	5	24	66	2	2	1	1	41	1	7	3	1	1	2
47	35	1	2	3	2	1	2	0	3	2	3	2	1	1	3	33	2	2	5	4	4	4	4	1	3	3	2	3	12	3	1	14	16	8	13	10	8	8	11	7	95	2	197	23	19	8	26	76	3	4	1	6	9	6	7	3	1	2	2
48	35	1	1	3	1	3	2	0	1	1	3	2	1	2	2	36	3	2	4	5	3	5	3	1	4	4	3	4	14	18	13	14	11	9	8	11	7	7	10	5	105	1	101	24	19	9	27	79	3	4	1	5	7	6	11	1	1	1	2
49	34	1	3	3	2	3	2	1	3	1	3	1	3	1	1	34	3	1	4	5	2	3	3	1	3	3	2	3	14	3	3	11	13	7	10	8	5	7	8	5	74	3	243	24	20	10	27	81	3	4	1	6	10	6	6	3	2	1	2
50	34	1	1	2	1	1	2	0	3	1	3	0	2	1	1	32	2	2	5	4	3	4	1	3	3	3	2	4	12	2	2	15	17	8	14	7	10	7	7	10	95	2	131	22	18	8	25	73	2	4	1	2	27	3	6	3	1	1	2
51	47	4	1	3	3	2	4	2	2	0	1	0	3	1	2	37	2	2	4	5	3	4	2	1	1	2	1	2	12	3	2	14	17	10	13	10	6	8	10	7	95	2	326	23	19	8	27	77	3	4	2							2	2	2
52	51	5	3	4	4	2	2	0	3	0	1	1	2	1	2	43	4	3	4	4	1	2	1	3	1	2	1	2	15	2	3	8	10	5	8	4	7	3	5	5	55	4	227	23	19	8	26	76	3	4	1	3	16	5	7	3	4	3	2
53	57	5	1	3	4	3	4	3	2	0	1	1	3	1	3	49	4	3	3	3	2	4	1	1	2	2	1	3	12	3	2	14	18	12	13	10	7	8	10	6	98	2	300	23	19	8	27	77	3	4	1	5	9	6	10	2	3	4	2
54	56	5	1	2	4	3	3	1	2	0	1	1	3	1	1	55	2	2	4	4	2	4	3	3	1	2	1	3	12	2	2	14	17	7	14	8	11	6	9	8	94	2	227	22	18	7	24	71	2	2	3	2						3	5	2
55	55	5	3	5	4	3	3	2	2	0	1	0	3	1	2	49	4	3	3	5	1	4	2	2	2	2	1	2	12	2	2	15	17	11	14	8	7	8	6	11	97	2	300	22	18	7	25	72	2	3	2							4	4	2
56	34	1	2	3	1	1	2	0	2	2	3	1	1	2	1	32	3	2	5	5	3	4	1	1	3	3	3	2	4	12	1	2	15	18	10	15	10	12	7	8	10	92	2	131	22	18	8	25	73	2	4	1	1	36	2	7	3	1	1	2
57	35	1	1	3	1	2	1	0	1	0	3	1	3	1	2	33	3	2	5	5	3	5	2	2	3	3	2	4	11	1	2	15	18	13	15	10	10	8	7	10	106	1	164	21	16	6	24	67	2	2	1	1	41	1	7	3	1	1	2
58	34	1	1	2	2	2	1	0	1	1	3	0	4	2	1	29	2	2	5	4	2	5	2	3	2	3	2	2	11	1	2	15	18	13	15	10	12	7	9	10	109	1	171	21	16	6	24	67	2	2	1	1	44	1	5	3	2	1	2
59	40	2	1	2	2	2	2	1	3	2	3	1	4	1	1	39	2	2	5	4	1	5	1	3	3	3	2	3	11	1	3	14	18	13	15	9	12	7	12	10	110	1	131	22	17	8	26	73	3	4	1	1	37	2	6	3	2	2	2
60	35	1	2	5	1	3	1	0	3	0	4	3	3	3	4	34	4	4	4	4	1	3	5	5	3	5	4	4	11	2	4	14	18	12	15	10	12	7	11	10	109	1	101	23	18	8	28	77	3	4	1	2	29	3	7	3	1	1	2
61	35	1	3	3	1	3	2	0	3	2	3	1	2	2	1	34	3	2	5	4	2	4	1	2	3	3	2	2	12	2	2	15	17	7	14	7	6	9	9	12	96	2	204	22	18	9	26	75	3	4	1	2	29	3	5	3	1	1	2
62	35	1	1	1	1	2	2	0	1	1	4	3	3	5	3	33	2	2	1	4	3	5	5	1	5	5	4	4	11	4	4	15	18	12	15	12	8	9	12	7	108	1	142	24	19	9	27	79	3	4	1	5	8	6	16	1	1	1	2
63	29	1	2	3	1	1	2	0	3	3	3	1	3	2	2	28	3	2	5	5	2	3	2	2	1	2	1	3	14	3	2	11	14	8	11	8	5	8	8	5	78	3	234	23	19	10	27	79	3	4	1	6	8	6	6	3	1	1	2
64	40	2	1	4	2	2	2	0	3	3	3	1	3	2	2	33	4	3	3	4	1	4	1	1	2	3	1	2	12	3	2	13	15	11	13	10	8	8	10	7	95	2	338	24	19	8	27	78	3	4	1	6	7	6	5	3	2	1

| SI#number | group | Age_yrs | Age | Religion | Education | Marriage_duration | Family_type | Children_15yrs | Children15yrs | Locality | Occupation | Current_duration_un | Total_unemployed_d | Income_family | Pt_net_contribution_ | Pt_net_contribution_ | Age_spouse | Education_spouse | Spouse_occupation | Spouse_net_contribu | Spouse_net_contribu | Duration_of_ILLNES | Current_psych_com | Total_duration_of_ab | Psychiatric_complic | Frequency_of_medic | Frequency_of_ICU_a | Number_of_episodes | TIME_SINCE_LAST_ | severity_CGIscore | Apathy_Inventory | CRASHBOUNCEsco | BASspouse_related | BAShealth | BASsupport | BASroutine | BASpt_support | BASresponsibility | BASother_relations | BASpt_behaviour | BASstrategy_CG | BAStotal | BAStype_of_burden | PSLES_1_yr | Domain1_WHOQOL | Domain2_WHOQOL | Domain3_WHOQOL | Domain4_WHOQOL | whqol | @1QOL | @2QOL | GHQ12 | Psychiatric_diagnosi | BDI_score | BDI_rating | HADS_score | HADS_rating | Duration_of_caregivin | Age_of_spouse | PT_DIAGNOSIS |
|---|---|---